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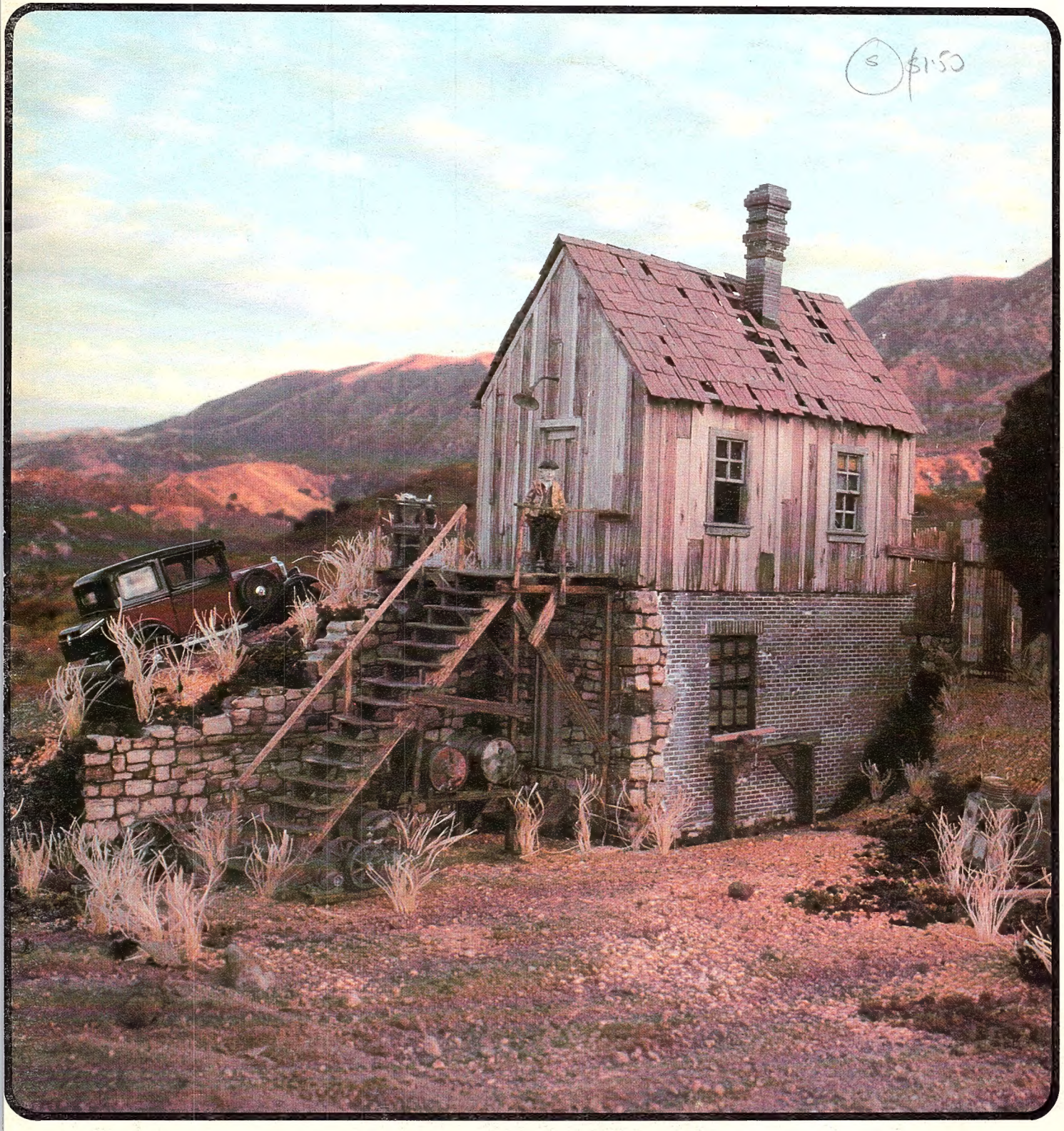

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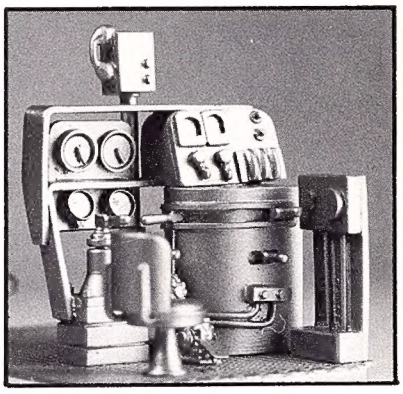

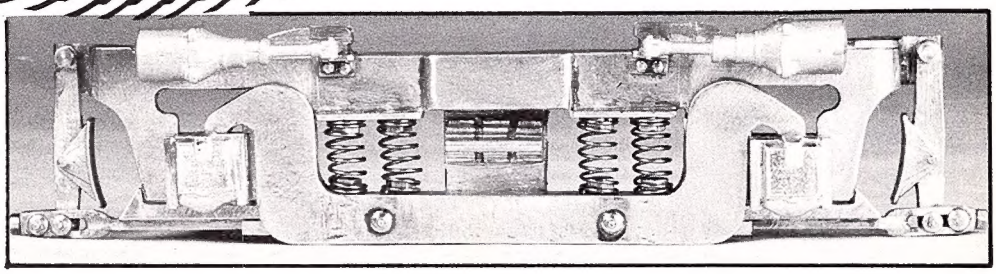

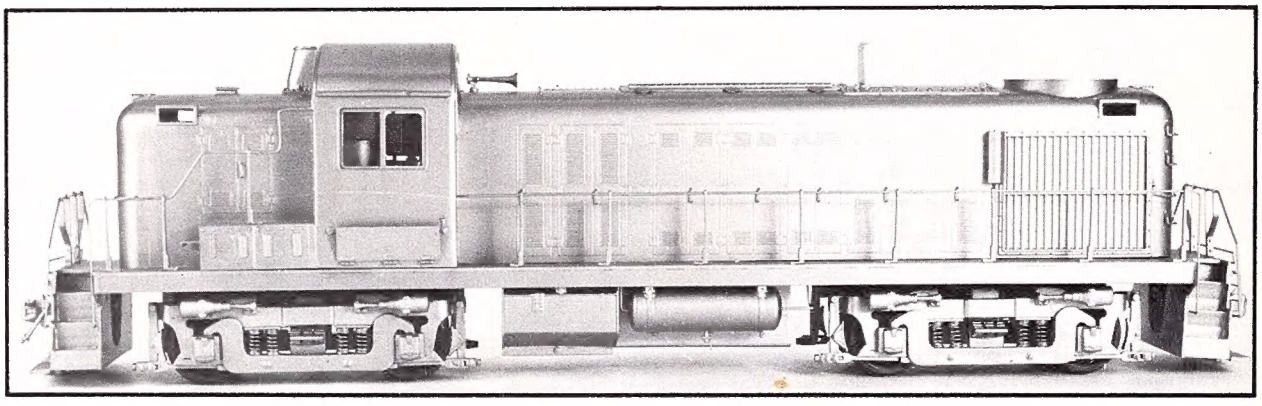

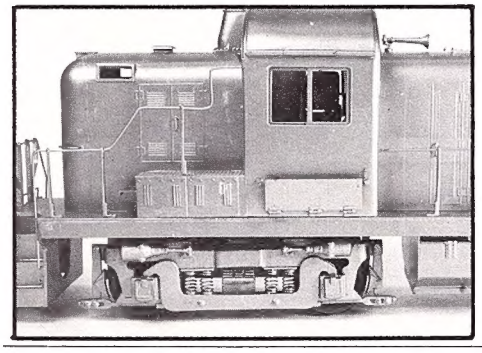

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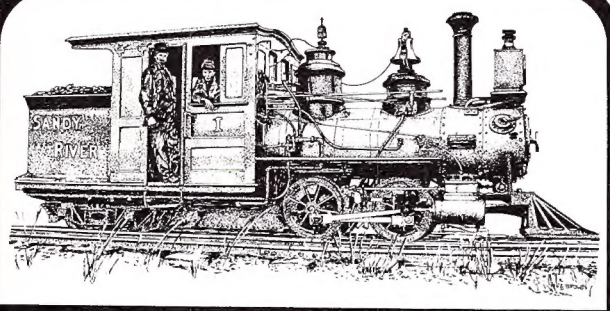
Nov/Dec 1978 Volume 4 No. 5



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COVER

This "wooden" shack is almost entirely cast in plaster. Tom Yorke built the model and photographed it for our cover. Tom describes how he achieves such a remarkable finish on his plaster models in this issue.

They did everything except hit it with a train!

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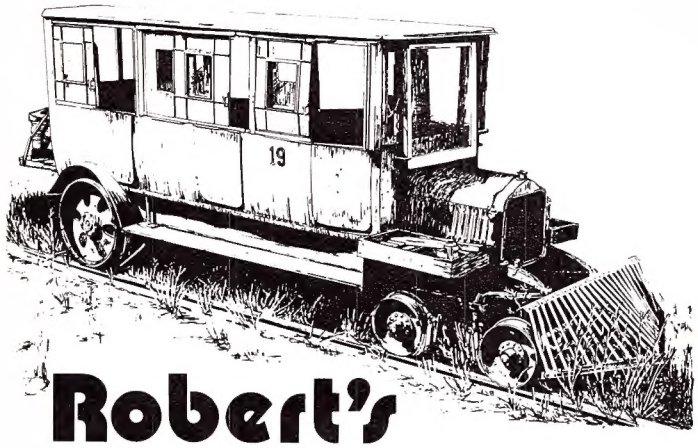


Robert's Ramblings....

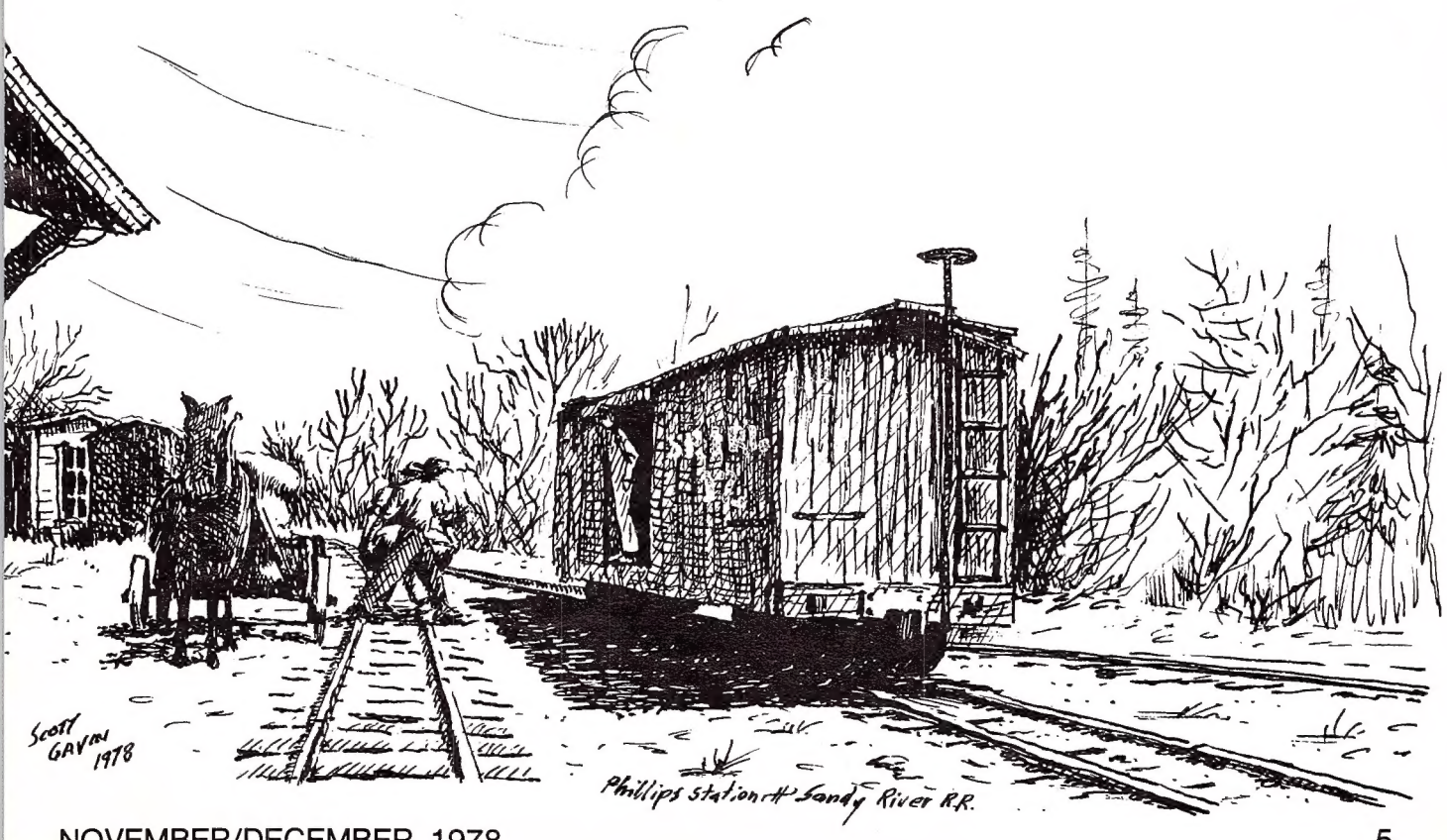
It's great to get together with old friends and make new ones. So I spent this weekend in the company of about 100 rabid narrow gaugers. There were even some standard gauge modelers and at least one circus fan. Each year Chuck Trombly hosts a narrow gauge get-together at his home in Richmond, California. The meet is always held in October and is eagerly looked forward to by all. Chuck, known as "stogie" because of his endearing habit of chewing on unlit cigars, has a beautiful "operating" On3 and standard gauge layout. It must be one of the largest in California. He throws open his layout, shop, and home for this meet. We start gathering Friday night but the bulk of the guests arrive on Saturday morning. The conversation lasts all day and then everyone goes out to a restaurant for dinner. I counted about 80 for dinner. Just like a convention but with no speeches and no awards. Then we all go back to Chuck's for more talking and movies or slides in the evening. On Sunday the more hardy members of the group go out to breakfast and then melt away until the next gathering.

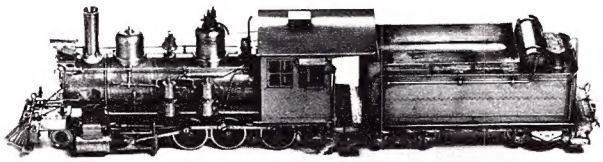
This year a number of fine models were displayed. Notable were the fine efforts by Colin Emerson, Mic Greenberg and Gary Nash. The idea of displaying models started last year and this year there were quite a number of models. No prizes, just conversation and tip sharing. Some of the manufacturers also had new products on display. The new PFM O scale couplers were operating on a special display ramp and three of the new line of Chooch Structures were shown built up. The new On3 passenger cars by The Original Whistle Stop were there to be handled by all. Papa Cliff Grandt was there with his new On3 passenger trucks. The new HOn3 E&B Valley caboose was also available for examination. Both Iron Horse and PFM had some of their new brass goodies for us to drool over. Jim Finnell had a completed model of the Durango Press Rotary snow plow. There were more but space prevents my mentioning them all.

There were people from all over the west at this meet. I had the pleasure of finally meeting and talking to John Maxwell from Wheatridge, Colorado who must have journeyed the greatest distance. There were people from the Phoenix area and a few hardy souls came down from Seattle. A large number traveled from the Los Angeles area as well. Business was contracted, models were shared and inspiration was provided.

Why "Ramble" on about this meet? Well I know of various other groups who do this across the land. One group is the "Narrow Gauge Mafia" in the Maryland area; they draw modelers from all over New England and the Atlantic area when they have a get-together. You might want to try this idea yourself. You only have to invite a small group to start with and it may grow until you have an "unforgetable" annual event. But don't blame me if it gets you so inspired that you get into your shop and build some models. After all that's what it's all about, isn't it??

Bob Brown





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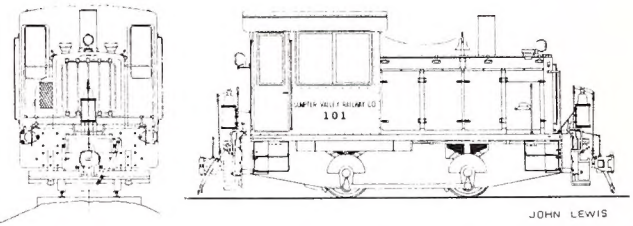

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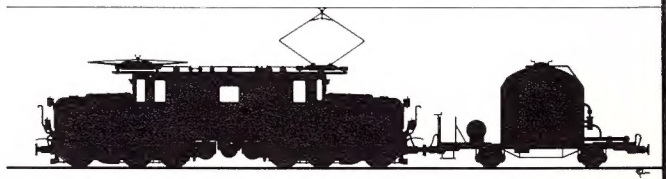

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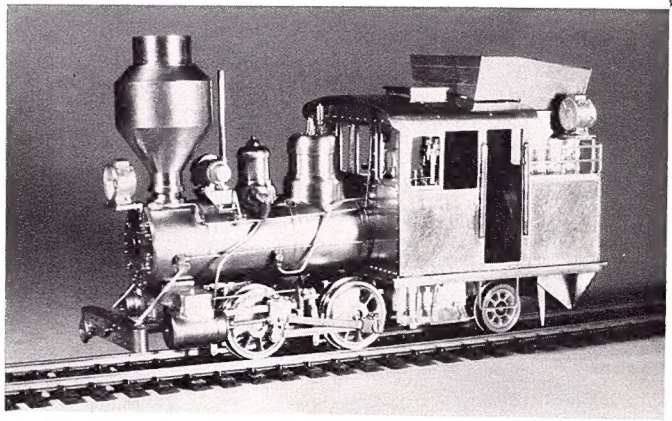

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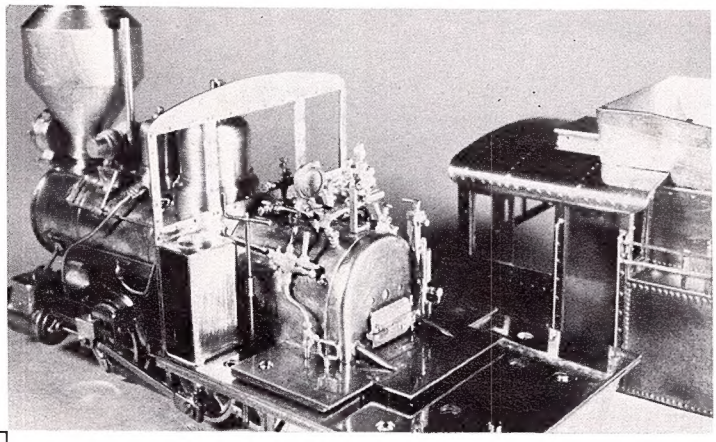

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The Pigeon Hole

Dear Sir,

The article in your July/August 1978 issue by Bill Coffey was excellent and very much in keeping with the general quality of your fine publication.

I would like to provide some additional information regarding the prototype standard gauge Falk No. 1 located at Ft. Humboldt State Historic Park in Eureka, California.

Both the Falk and the Andersonia, while housed inside a building, can be moved outside and frequently are for display, photographing and/or measuring. Should you or your readers arrive at the Fort, and find that the Falk is not out, you may contact me or any of the Fort Humboldt employees and provided there is sufficient muscle and time available, the locomotives can be moved outside.

The Andersonia is a Gypsy locomotive from the Bear Harbor and Eel River Railroad in Northern Mendocino which presently is in the process of being restored to operating condition by the Northern Counties' Logging Interpretive Association.

Also at the Logging Museum at the Fort is an operating Dolbeer steam donkey which is fired up every Thursday during the months of June, July and August, and can be steamed up at other times should there be sufficient reason.

We also have 24" by 36" drawings available of the Falk and Andersonia engines, the Mattole 0-4-2 No. 1, the Kiso Logging Railway engine as operated by Henry Sorenson (both of these engines are 3 foot gauge) and a 2-sheet drawing of the Dolbeer patent vertical spool donkey engines. These drawings are available from the Association at $2 per sheet. Members of the Association are entitled to a 10% discount on items sold through the Logging Museum.

Sincerely,

William L. Fahey, Jr.
Acting Secretary
Northern Counties Logging
Interpretive Association

Dear Sir,

I recently wrote to Westwood Models, P.O. Box 7255, Fort Wayne, IN 46807, concerning the availability of plans for the Sumpter Valley Railway arched roof passenger cars. Westwood made kits of these cars in 1970. Mr. Byer replied that the plans were no longer available, nor are the kits. Do any of your readers have a set of these plans, left over from a kit, that could be copied?

It would seem that, with the restoration of a portion of the Sumpter Valley Railway, there would be a renewal of interest in this unusual equipment which, in its general proportions, resembles the equipment of the Kennebec Central Railroad.

I shall check "The Pigeon Hole" for a response.

Thank you,

Fourtin Powell
Box 23
Round Pond, ME 04564

Dear Sir:

Where the h—— does Michael Trent get off blasting Charlie Getz about D&RGW "authenticity" at Durango and dragging in a gratuitous slur at TOYOTA owners? I really resent this chauvinistic remark, this put-down to Toyota owners and I am *serious.* My Toyota is the best put-together car I've ever owned with the exception of my 1941 Chrysler; both cars are in daily use here.

There is absolutely no need to make a slur about "Toyota quality", and especially by comparison with Cadillac, whose Seville model of a few years ago was an overripe lemon. Just don't put down my choice of cars, MIKE! Your letter was too long by three l-o-n-g paragraphs.

Ted Wurm
Oakland, CA

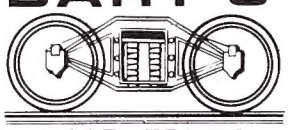
Dear Sir,

I am planning on riding the Rio Grande this October and was looking through my copy of *The Rio Grande Pictorial* by Del McCoy and Russ Collman. On page 152 there is a photo of a D&RGW Lima Shay #5. The caption states that D&RGW #5 was one of seven Shays owned by the railroad. Does anyone have any further information on the Rio Grande Shays? I would like to see an article on the Rio Grande Shays. Any info on the Shays would be greatly appreciated.

Yours truly,

Michales Provine
721 North Chesnut
McPherson, KA 67460

BART'S



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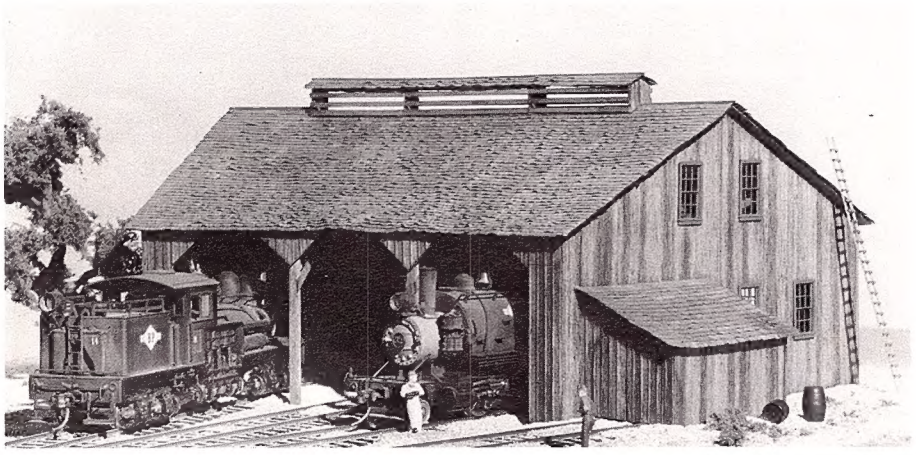

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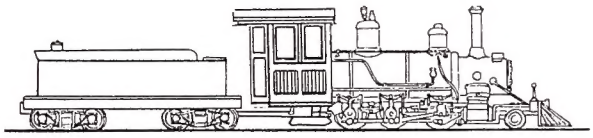

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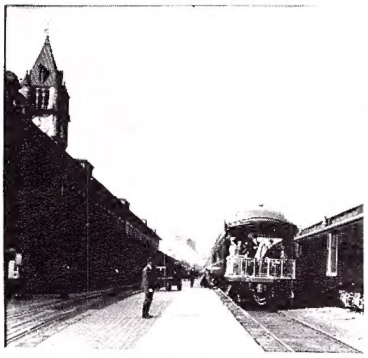

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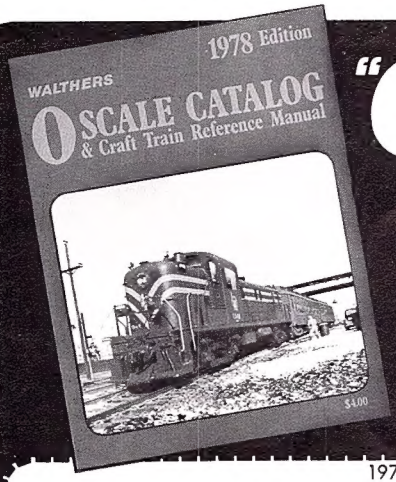

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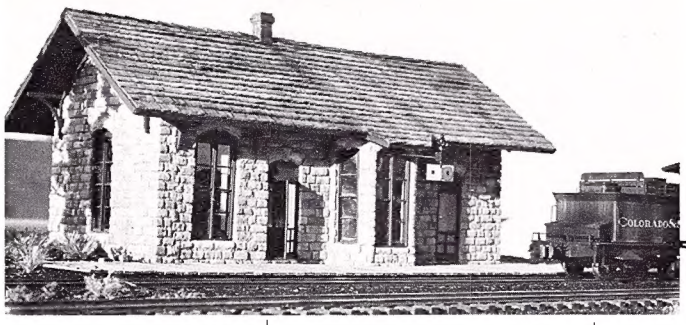

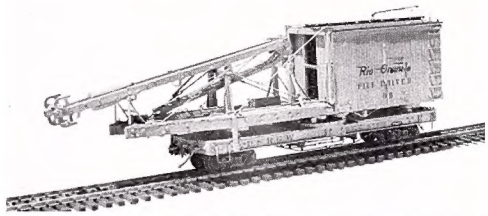

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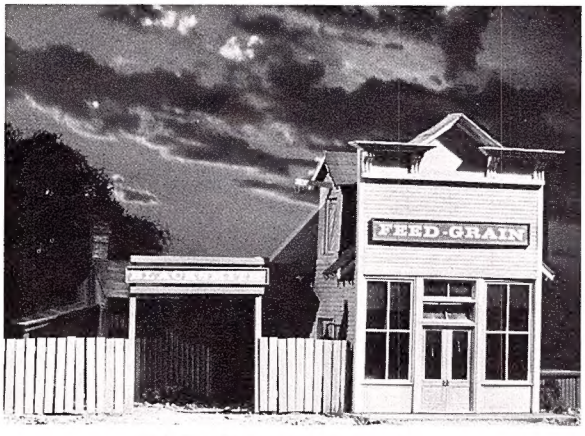

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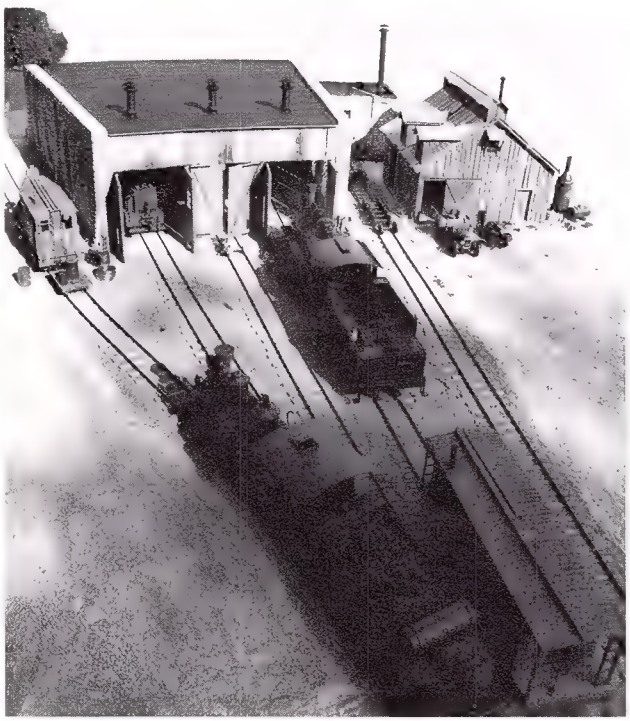

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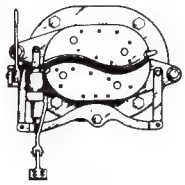

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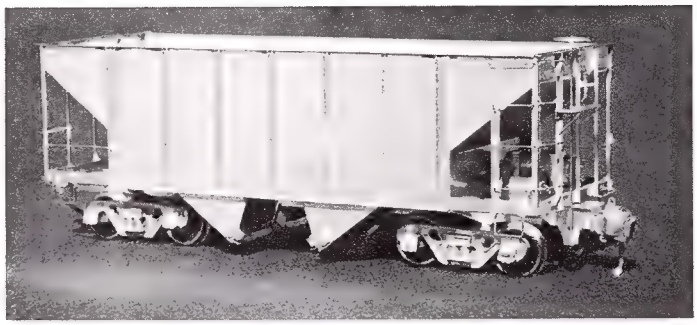

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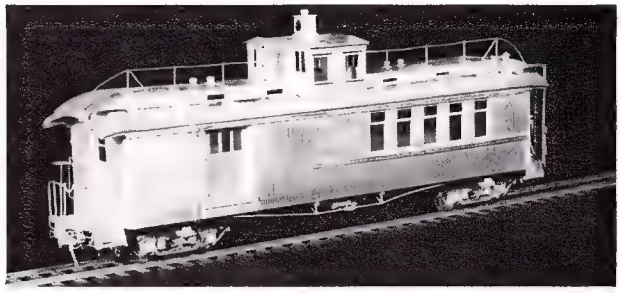

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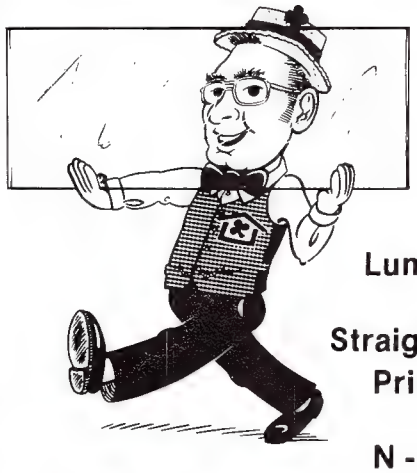

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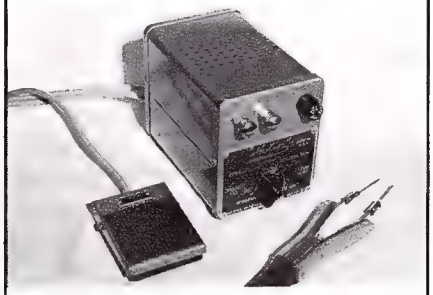

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On November 20, 1879 the Sandy River RR laid down its last rail and the first official train entered Phillips, Maine. The 18 mile long railroad was the first two-foot gauge railroad ever built in Maine. To commemorate this historic occassion, FLAG STOP is issuing on November 20th, 1978 a special SANDY RIVER RR CENTENNIAL CALENDAR with illustrations selected from the best of the FLAG STOP collection to capture anew the feeling of the era ushered in by the Sandy River RR. There will be 13 illustrations, including both photos and artwork. Captions are used to further denote special days in the life of the Sandy River RR. Size is 8½'' x 11'' folded. Paper is 80 lb gloss enamled stock with a bristol cover for added strength when hanging. The illustrations are suitable for framing when the calendar is no longer in use. The calendar can be purchased for $5.49 and it is mailed via 3rd class. Add $1.00 extra if you desire first class mailing. A special offer is available for the first 200 (that's 2 feet times 100 years) paid orders. The advance payment for the first 200 buyers gets them a seperately printed ink drawing suitable for framing. For those of you who missed out on the first two-foot calendar last year, you had better get your checks off today. This printing is limited to 1,000 copies.

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The three illustrations are printed on yellow bristol cover stock using brown inks. The size is 11'' high by 17'' long for each print. There will be ONLY 200 sets printed and each will bear a number. The illustration used on the cover of Volume #2, of SR&RL engine #23, size 8½'' x 11'', will be included as a bonus since it is work of art which spurred this whole offer.

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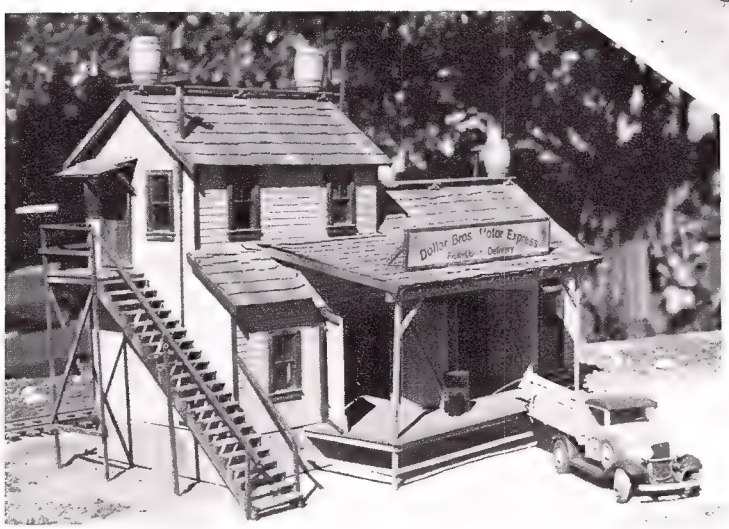

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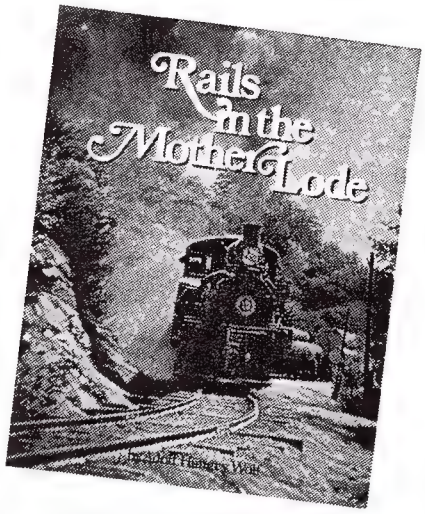

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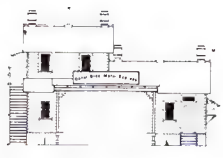

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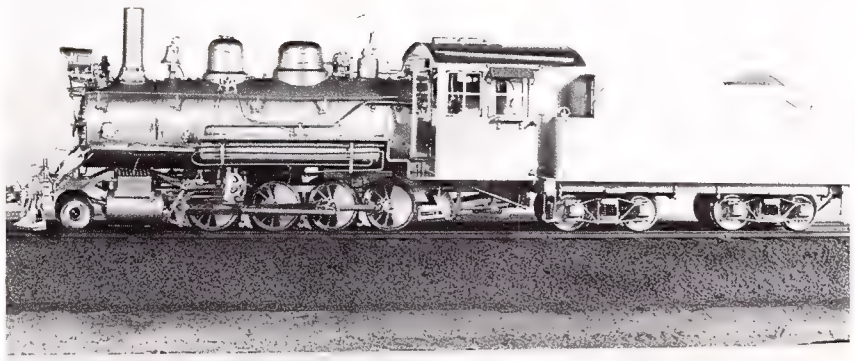


On3 C&S/RGS #74
Sunset Models
19986 Mallory Court
Saratoga, CA 95070

The latest On3 model from Sunset is the hefty Brook's consolidation used on a number of the illustrious Colorado narrow gauge lines. The prototype was truly a boomer, operating on the Colorado & North Western, Denver, Boulder & Western, Colorado & Southern, and the Rio Grande Southern. The locomotive is still in existence, residing in Boulder, Colorado.

The model captures the look of the prototype engine. This Brook's hog has a rather ungainly appearance. The fat boiler and huge cylinders seem out of place in the narrow gauge world. Brooks built some real "hammer throwers" in standard gauge. Narrow gauge historians claim that this beast was hard to fire and ran out of steam on a long climb. This could add an interesting operating constraint to your railway.

The model is the latest in a series of On3 locomotives produced in Korea by Samhongsa. The Koreans are improving the quality of their models with each run. The most impressive feature of this model is the quality for the price of $485 retail. With the price of quality On3 brass from Japan, in excess of $1,000, a good locomotive for less than $500 *is* impressive.

The #74 exhibits good workmanship throughout. The solder joints are clean and mechanically sound for the most part. Workmanship on this model is greatly improved over some of the early Korean work. Some of the piping needs to be straightened on the sample reviewed. This is a minor problem in view of the price. The superstructure is made from photoengraved brass and formed sheet brass. The model has quite a few high quality brass casting. The cab interior detailing is quite good. This detailing can be made more visible by leaving the operating doors open. Open doors and cab windows give a locomotive an in-service look. The cab on this model is removable so painting and glazing can be done.

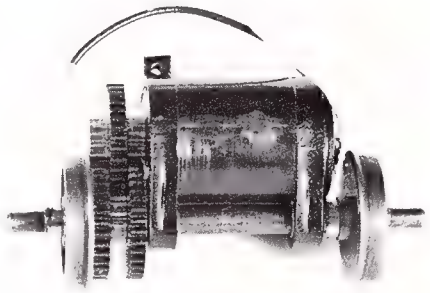
The mechanism is free of binds and is well done. The can motor provides plenty of power and should be strong enough to haul a good sized train. The gear ratio is a poor choice for this model. The ratio is too low. Consequently, the low speed performance is not too impressive. The importer is aware of this problem and has replacement gears on order. The model is lightly sprung and will run over some pretty rough track without ending up on the ground.

Sunset has provided additional detail parts such as the classic "bear trap" stack. These parts will allow the modeler to create an accurate replica of the C&S version of this engine.

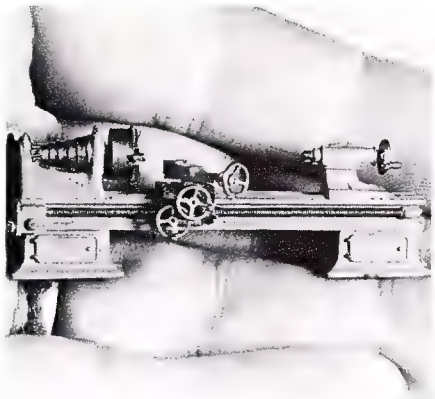
If you are looking for an unusual piece of Colorado motive power, please look into this one. *Gene Deimling.*

Power Unit
NWSL
Box 423
Seattle, WA 98111

I have a feeling many of us have overlooked the possibilities of the new "Magic Carpet" power unit being sold by NWSL. I thought the unit was only good for street cars until I looked into the facts. These units are small, axle hung Sagami motors which are designed to hang in a truck just like a prototype traction motor. The Sagami is mounted in a plastic case which holds the motor in line with the gear system. My sample runs very smoothly. You can order your Magic Carpet in either three rail (uninsulated) or insulated for two rail operation. You have a choice of wheel diameters ranging from 22 inches up to 40 inch diameter depending on the wheel tread chosen. You can also choose wheels with standard O gauge contours, or a finer wheel contour (called NWSL-Q) or the exact scale ¼AAR wheel standards. Incidentally the promotion sheet credits me with developing ¼AAR standards. They were developed by several other modelers and not me. The trucks can be ordered in five foot gauge or four foot 8½ inch gauge.



These units can only be used in standard gauge since the motors are too wide for On3. They have a wide use in motor scooters and railcars as well as trolleys. I hope you will try one. My sample is so small I could easily put it in a small track inspection car. I could even put it in a four wheel flat trailer since the unit does not stick up above the wheels. The insulated version sells for $30.45. Write to NWSL for a data sheet which explains all the various options on gears, motor, wheels, and axles. Incidentally NWSL also has ¼AAR wheel sets available on special order. You can get metal blackened wheels in 26, 33, and 40 inch diameters for $2.50 under 40 inch and $2.80 for the 40 inch wheel sets. These are excellent wheels and I hope their availability will help ¼AAR to develop more. *Bob Brown.*



HO Machinery
SS Ltd. Industries
P.O. Box 11186
Reno, Nevada 89502

One of the cherished memories of any trip to the Sierra R.R. in Jamestown, California is a visit to their shops – one of the last operating belt-driven machine shops in the nation. From 1880 to 1930, almost all self-respecting machine shops used belt-driven lathes, drill presses or band saws. The leather belts were driven from a large wheel generally powered by a steam engine and boiler.

SS Ltd. some years ago offered a number of kits to recreate a belt-driven machine shop. Now, they have re-released these kits in individual boxes and have released several new machines to boot. The following machines are now available: 24 inch lathe, table saw (both small and large), 18 inch trim saw, 18 inch jointer, 24 inch planes, Handline Buck scroll saw, Barnes Drill Press and Desterline milling machine. Also, kits for a Baker hi-steam boiler, Clark 150 hp steam engine, electric hoist drive and belt driven "iron" are offered.

Each kit contains high quality white metal castings for the machine itself and details, hand tools, brass wire for the shafting and chart tape for the leather belting. Each kit contains a plan/instruction sheet with an exploded isometric drawing of the machine. While the instructions are terse, generally assembly is easy. Enough belting and pulleys are included to "hook-up" the machinery.

The Baker hi-steam boiler differs a bit in including cardstock, and brick and steel plate sheeting for the boiler itself. The belt drive iron has parts to extend the overhead drive system from machinery to boiler.

With these kits you'll be able to recreate those old time operations, and enhance any shop. I for one am glad to see them back on the market. Available directly from SS Ltd. *Charlie Getz.*

O Scale Minarets 2-8-2T
NorthWest Short Line
P.O. Box 423
Seattle, WA 98111

At long last, the O scale Minaret from NWSL has arrived from Japan. It has been a good many years since I first saw an announcement and photo of the pilot model in **FINELINES.** My hat is off to Mr. Martin at NWSL for his persistence.

The Alco 2-8-2T was one of many catalog engines built for use by the lumber industry. This chunky little locomotive may have acquired the Minaret name from one of the early users, the Minarets & Western. I was not able to obtain much information on the prototype of this locomotive. Prototype information on logging rod engines seems to be a well kept secret. Ken Schmelzer's series in the **GAZETTE** shed some light on logging Mallets. The Minaret and some of the Baldwin catalog locomotives could use some exposure too.

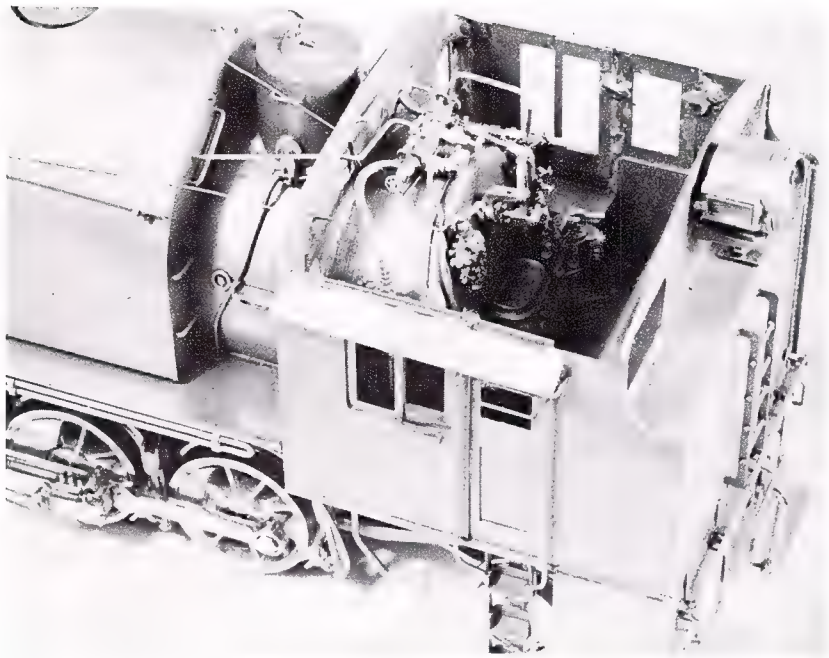
The model is a well done replica of the prototype. The builder has captured the compact yet powerful appearance of the full sized Minaret.

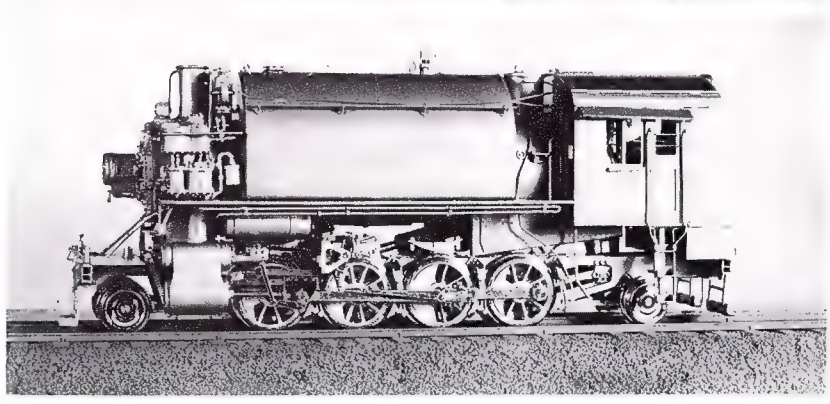
The model is constructed from sheet brass with some turnings, coinings and a lot of high quality brass castings. The overall workmanship and level of detail is excellent. All of the visible piping and fittings evident in prototype photos are on the model. The cab interior is fully detailed with all major backhead detail installed. The cab roof is removable which should make painting of the interior relatively easy.

The mechanism is composed of a Sagami can motor, gearbox, coined frame, and machined brass-centered drivers which are sprung. The design is traditional and it works very well. It is smooth and reasonably quiet. The minimum speed was approximately 2.5 scale mph. No accurate test of maximum speed or pulling power was possible owing to lack of O gauge trackage. I suspect the pulling power will be quite impressive given the weight (38 oz.) of the model and size of the motor.

The NWSL Minaret should open up all sorts of compact layout possibilities both in logging and short line. By careful selection of rolling stock a modeler should be able to build an O scale standard gauge railroad in the space of the average HO layout.

The retail price for the NWSL O scale Minaret is approximately $800. The model is highly detailed and well made. *Gene Deimling.*





On3 Nevada County Narrow Gauge Mogul
Iron Horse Models
P.O. Box 1802
Davis, CA 95616

The latest offering from Iron Horse Models is a quarter-inch scale model of the Nevada County Narrow Gauge #5 mogul. The model is an accurate representation of the Class 8-20-D Baldwin as it looked in the late 1930's. The prototype was built in 1875 for the Carson & Tahoe Lumber Company. It was acquired by the NCNG in 1899 and continued in operation through the early 1940's. The locomotive was sold in 1943 to Frank Lloyd Productions for use in movie productions. according to Dr. Al Nickel of Gemini Scale Models, the locomotive still exists today gathering dust on a backlot in southern California.

The #5 mogul was one of a number of interesting features of the NCNG. The appearance of this locomotive is unique and definitely non-Colorado in design. The short stack and tall wooden cab add homely touches to this locomotive.

This model is the work of T. Kodama, one of Japan's more exotic builders. The locomotive and tender superstructures are constructed of sheet brass with turned domes, a coined frame, and large number of Precision Scale Company's excellent lost wax castings. The workmanship exhibited on this model is excellent. All of the solder joints are free of excessive solder and are mechanically sound. The model appears to be well engineered and is a tribute to the people at Iron Horse and T. Kodama.

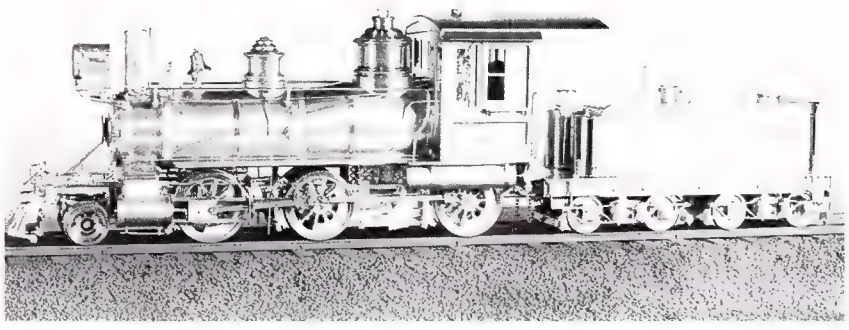
The drive train is unique owing partly to the design of the prototype. The designers have managed to completely enclose the motor and gears inside the superstructure. The micro-motor sits inside the boiler driving aft and down through a series of three spur gears to a ring and pinion set on the center drive. It sounds a bit complicated but it works extremely well. The mechanism produces virtually no noise through the low and medium speed range. The minimum speed is less than one scale mile per hour running on pure DC. The top speed is a little above forty scale mph which is fast enough for most short line operators. I doubt that the NCNG ever ran this locomotive any faster than that.

The minimum radius for this mogul is 37 inches. At first glance this seemed a bit much considering that a PFM/IHM K-27 or Sunset K-28 will go around a 36 inch radius. The model is a very accurate replica of the prototype and it could not get around the equivalent radius. A 37 inch radius is a scale 148 foot curve which is less than the minimum radius that a F&CC 30 foot boxcar can handle. The model can be made to go around a 32 inch radius by lengthening the lead truck frame about .050 inches.

The Iron Horse mogul has a fully equalized running gear. The first driver is held in place with a screw located in the center of the frame. This permits the driver to equalize in a lateral fashion. The second and third driver sets are equalized in a longitudinal direction via a pair of levers which rest on the driver bearings. The system is similar to that which was used by Kodama on the IHM Ma & Pa locomotive. The drivers are permitted to move vertically about an eighth of an inch. This is far more than what is needed on even the worst of trackage.

After a careful review of prototype photographs and Herman Darr's drawing (available from Coronado Scale Models), I could only find one small item missing from the model. The missing part is a small bracket on the locomotive brake lever. The rest of the detail is there including a full cab interior. The model is detailed to represent the prototype in the late 1930's. By changing the pilot and headlight, the model could be back-dated to the late 1920's.

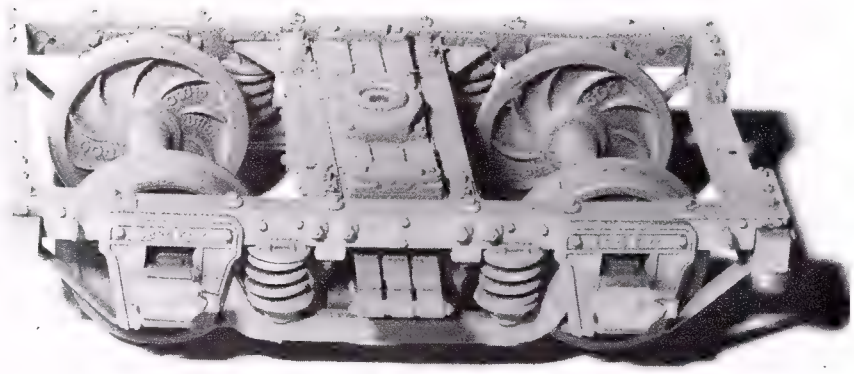
In conclusion, the Iron Horse NCNG mogul is an excellent model. It is encouraging to see such a fine model produced of a non-Colorado prototype. As with most On3 models these days, this is a very limited run which probably won't be rerun in the near future. The suggested list price is approximately $750 which may seem like a bargain a year from now. Thanks to Vern Cole, owner of the Train Shop of San Jose, for lending me this sample for review. The prototype photo is from the collection of Harold K. Vollrath. *Gene Deimling.*



HOn3 D&RGW Water Tank
Durango Press
P.O. Box 1836
Lynwood, WA 98036

With the demise of Timberline's structure line, the only 50,000 gallon water tank model produced was no longer available. Now Durango Press has released a brand new kit for this familiar structure. These tanks were constructed by the D&RGW in 1900 with either octagon or round roofs. Some tanks were double-spouted as well. The kit is for a single-spout octagon roof tank. The DP kit is unique for many reasons. The tank body comes fully assembled and properly tapered from Kappler Wood Works. Wood Wizard Frank Kappler also pre-cut most of the excellent quality stripwood and even included a pre-built ladder. Incredibly the tank body contains no reinforcement yet is amazingly strong. The kit also contains cast metal detail parts for concrete leg supports, roof finial, and spout assembly; styrene castings for nut-bolt and tank band fasteners; and cardstock for the roof and tank bands. The roof parts are pre-cut, needing only to be folded and glued. Paper is provided for tar paper, although Campbell shingles which are not provided can easily be

substituted. Comprehensive plans and instruction are included as are isometric drawings. All in all this is a top rate kit with top rate components. My only complaint is that it is not available in Sn3 or On3. Ask for kit DP#59 at $14.95. *Charlie Getz.*



Old Time Sawmill
Fine Scale Miniatures
49 Main Street
Peabody, Massachusetts 01960

Fine Scale Miniature's latest release is a sawmill based on a contest winning model by Charles Dyxin. This is not a re-release of their previous sawmill, though it is similar in its backwoods appearance. This is a larger facility and offers a greater variety of new castings.

The kit is of the usual high quality offered by F.S.M. and contains good quality wood for the board by board construction of the building, most of which is pre-cut, the remainder being color coded for easy identification. It also contains a host of metal castings for the interior detailing, the necessary templates for wall, roof and floor construction, and a large format instruction/plan sheet with many photos of the finished model.

The instructions take you through a series of sub-assemblies which in turn result in a fine finished product. No problems were encountered during construction, although a word of caution regarding the small blocks marked "C" on the front side wall template should be mentioned. These blocks support the cross members between the two walls, and are clearly marked on the front side wall template #4, but have been omitted from the rear wall template #5. It is an easy matter to transfer this information to the assembled rear wall, but don't be surprised to find that their location is on the siding rather than on the wall framing.

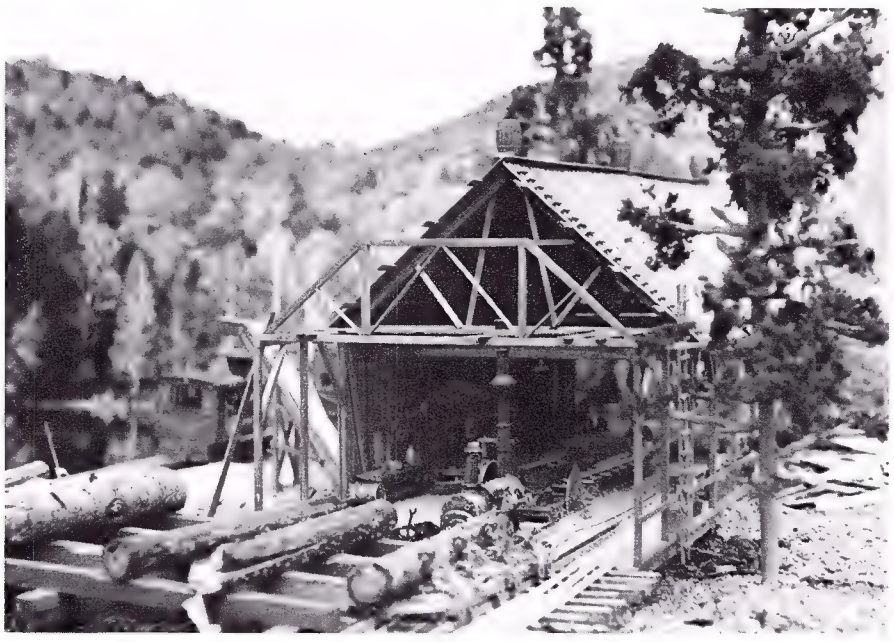
Weathering instructions for finishing the wood are provided. A solution of ammonia and india ink is suggested and gives outstanding results. However, one should weigh the objectional odor of the ammonia against the final product before proceeding with this method. I chose to use this suggested method, but found it advantageous to keep the weathering solution in a container with a very small opening in order to reduce the ammonia fumes.

Separate instructions are also included for ground cover and the making of realistic logs from dowels.

Looking at the finished model, I think the addition of an overhead belt drive system for the various pieces of machinery would be of greater interest than the individual belt drive system provided. All in all an excellent kit of good value at $39.95. *Colin Emmerson.*

On3 Passenger Trucks
1040 B Shary Court
Concord, CA 94518

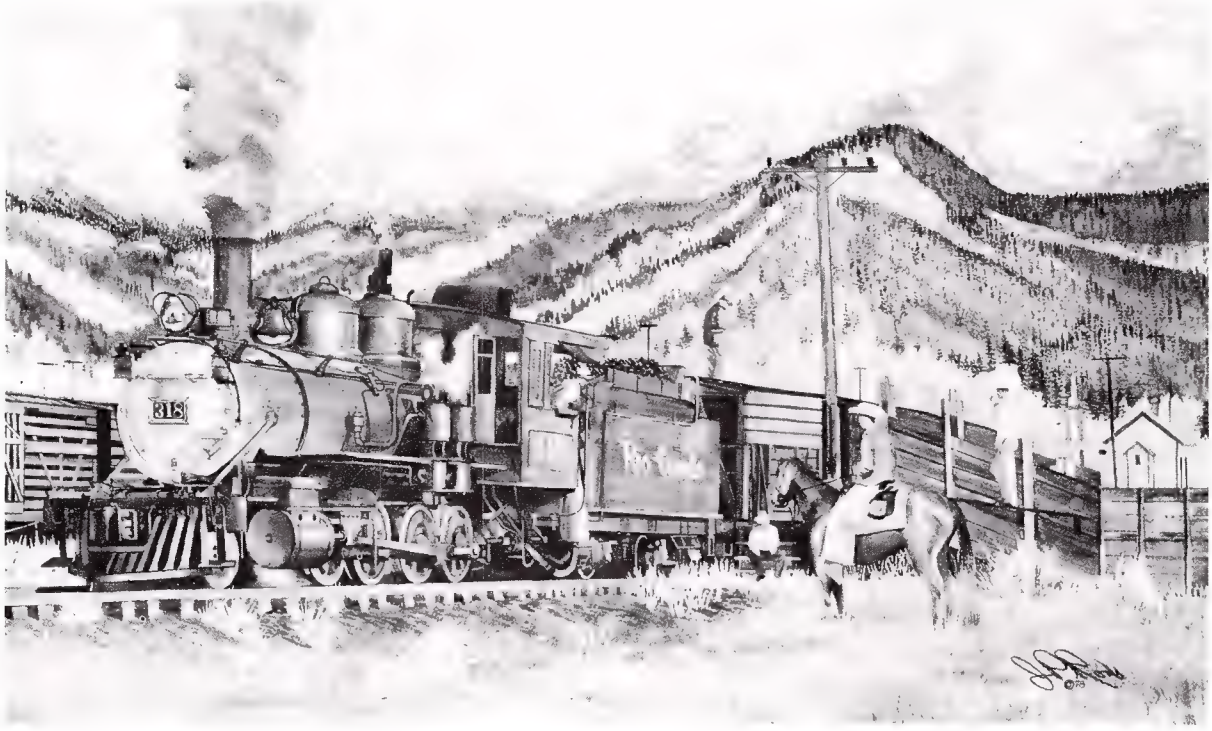
Grandt Line now has their new On3 D&RG passenger truck ready. This truck kit is a beautiful set of black Delrin injection moldings. I found the parts fit together well and the detail is the usual exquisite quality we have come to expect from Grandt Line. Each truck consists of a pair of side frame castings complete with the raised letters D&RG and the date. The wood beam on the side frame has wood grain and the coil springs are cast on. The journal box lids are separate castings as are the bolsters and leaf springs. The leaf springs can be made to flex with enough weight. The end beams, which hold the truck together, are separate castings. The trucks come with Grandt's superdetailed wheels with steel rims and raised lettering. Three versions of the truck are available. The first is for the original truck as found on the private car RICO today. This truck has an original wood bolster. Ask for part #3054. The second version is for the later trucks with a composite wood and steel bolster. As I understand it when the wooden bolsters wore out a steel bolster was bolted onto the top of the wooden bolster. This truck has two versions of rollers available. One is body mounted and one version mounts on the bolster. This style of truck is on the private car EDNA. Ask for part #3055. The third version has a cast steel outside bearing bolster and is the type found on most of today's Silverton cars and the cars used at Knott's Berry Farm. Ask for part #3056. Grandt also has a 40 piece brake detail set available for these trucks. The set contains the various rollers, brake return springs, and brake parts to help detail your trucks even more. This set is part #3057. The trucks sell for $10.00 per pair complete with wheels and the brake detail set sells for $3.50. This is an outstanding product. *Bob Brown.*

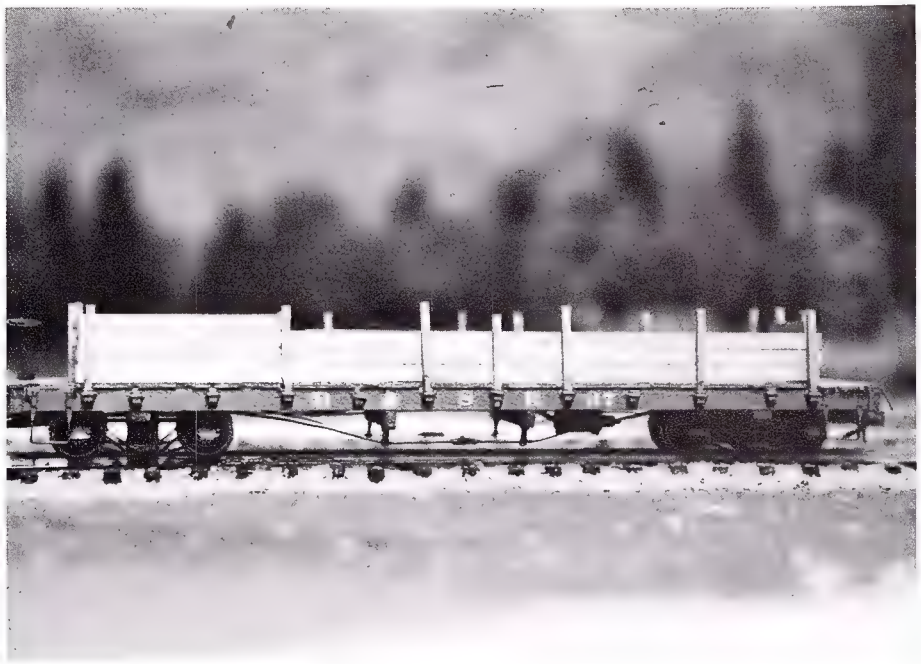


Pro-Custom Hobbies, 3700 Havana St., Denver, CO 80239 has some very nice "dishwasher proof" coffee mugs available. Each cup sells for $3.25. They are available decorated with RGS #20, RGS #2 Galloping Goose, a D&RGW K-28 as used on the Silverton train and the Georgetown, Breckenridge & Leadville #44, 2-8-0 as used at Silver Plume. Pro-Custom is planning to issue cups for UP #8444, a C&TS #480 and several other main and short lines. For some reason my coffee tastes a bit better when I use my RGS cup.*RWB.*

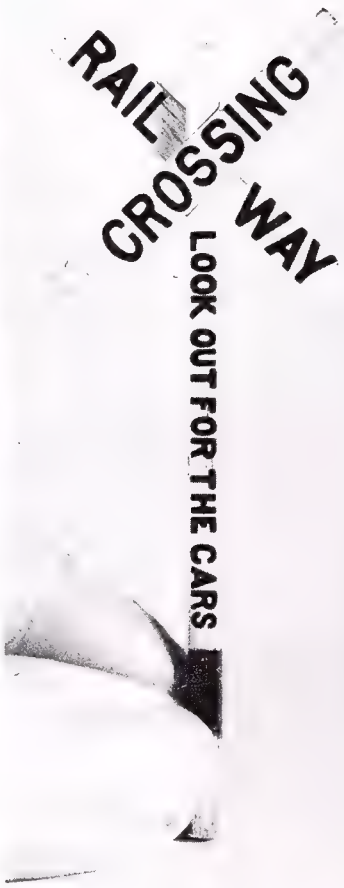
Many of you have seen the excellent scratch built Sn3 models by Jan Rons. Jan is not only an accomplished model builder but he is also an excellent artist. We will be showing one of his paintings in a future issue but I want to share his painting service with you now. Ron will paint on commission original water color paintings for you of railroad subjects of your choice. The prices vary between $250.00 and $800.00, depending on how much research is necessary for your painting. Four sizes are available. They range from 20 inches by 27 inches to 27 inches by 35 inches. The paintings come mounted on a color coordinated mat and may be charged on Master Charge or Visa cards. I recently had an opportunity to examine a painting of a C&S narrow gauge locomotive and found the painting to be outstanding. Ron's service is an excellent opportunity for you to purchase a custom painted watercolor of a scene of your choice. Write to Ron's Art Graphics, 4045 East Palm Lane, Phoenix, AZ 85008 for full information and a descriptive brochure. *RWB.*

D&RGW #318 by Jan Rons.

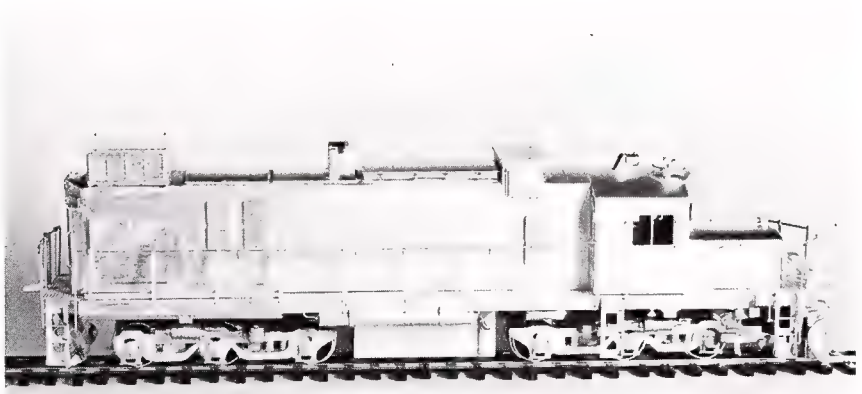




Here are two photographs of two of the kits being offered by Sandy River Car Shops. While these are not new kits I felt you might like to see what two of their kits look like assembled. The box car is a Sandy River & Rangely Lakes series 55-58 and sells for $16.95 less trucks and couplers. The car is 24 feet long. Car #55 was converted into tool car #562 and #64 was converted into a stock car in 1916. Both kits feature a pre-milled subfloor, Grandt hardware, and Northeastern wood. The plans for the cars are very good and are by Clyde Estey. The flat car sells for $10.95 less trucks and couplers and features a new Portland Product's cast metal bolster. If you want to try two-foot painlessly write to Sandy River Car Shops, 567 Rockdale Ave., New Bedford, MA 02740 and order a kit. *RWB.*



Vintage Reproductions, Box 7098, Colorado Springs, CO 80933 has released a set of dry-transfers for railway crossbucks. The design is based on a Colorado Midland crossbuck. The prototype was copied faithfully which accounts for the slightly uneven line weight of the letters. The dry-transfer set provides enough material to do 24 signs and comes with a complete set of instructions on how to make a crossbuck. I followed the directions and produced the O scale crossbuck shown in the review photo. The price is $3.95 and the set is available in N, HO, S and O scales. *EED.*



HOn3 Diesel
Iron Horse Models
Route 1, Box 1802
Davis, CA 95616

In 1969 the first batch of a group of eleven three foot gauge diesels was constructed by the Montreal Locomotive Works for the White Pass & Yukon Route. Later in 1972 a second batch was delivered to complete the set. Two of the engines were lost in a fire but the other nine locomotives are in use today. The locomotives have been changed over the years so Iron Horse decided to model the 107 as it appeared about two years ago. I applaud Iron Horse Model's venture into modern narrow gauge diesel locomotives. Without these prototype locomotives we would have no narrow gauge today except for rare foreign lines or preserved railroads.

The model comes completely assembled and ready to run. Mine ran well right out of the box. It is very cleanly constructed. No solder shows and the parts are attached straight. All the wheels are powered and two weights are included. The fuel tanks come off if you want to add more weight. Full color details are provided as well as complete painting information. There are about 55 lost wax castings on the model. Some of the tooling was done by Grandt Line. The coupler pockets will accept Kadee couplers. This is a fine model of a modern diesel for the contemporary narrow gauge model railroad. The suggested list price for this model is $210.00. *Bob Brown.*

HO Hall's Hardware
Evergreen Scale Models
1717 N.E. 92nd St.
Seattle, Washington 98115

Ever so often a new kit comes along that is so different and innovative that it can be considered revolutionary. Revell's styrene buildings in the 50's; LaBelle's open clerestory passenger cars, and SS LTD's highly detailed buildings in the 60's; Model Masterpieces – Yorke plaster buildings and Magnuson's resin in the 70's. All, to a certain extent, were "firsts" which resulted in the introduction of new techniques and new technology. To this list must be added Hall's Hardware by Evergreen Scale Models.

Styrene as a construction medium is not new. Al Armitage had a series on scratchbuilding in this medium as far back as 1959 in **MODEL RAILROADER.** Styrene pre-cast buildings are widely available from a number of manufacturers including AHM, Revell, and Con-Cor. But to our knowledge, there has never been a craft kit offered consisting of styrene structural components. Hall's Hardware contains styrene siding, sheet, strips, and shapes. There is also clear acetate, wire, roofing tape, and comprehensive instructions/plans included.

This reviewer had never worked with styrene before. Now I wonder why. Using MEK (Methyl-Ethyl-Ketone available from any paint shop) and Testor's liquid cement, I was able to assemble my sample in a fraction of the time a similar wood kit would have required. Since my time is limited, and the construction was enjoyable (unlike a simple snap-together kit), I consider this to be a plus. Second, styrene is a "clean" medium. By this I mean that it does not have "fuzz" or ragged edges when cut or shaped. The resulting model is much more realistic due to this. Third, it's a joy to work with a kit where there has been a lot of thought invested. Here, wood-wizard Frank Kappler has shown his versatility in pre-cutting almost all the styrene. Incredibly, all the walls come pre-cut including window and door openings – the Grandt details fit like a glove.

Further, the instructions/plans are comprehensive, covering each step in detail. They are easy to follow and well written. All of the parts are bagged in groups, such as "main building", "side shed" with a parts list showing what each bag contains keyed to the instruction sheet and plans. Obviously, someone who knew what he was doing designed this kit.

Not all is rosy, however. Styrene does have limitations. For one, it cannot effectively be stained to resemble weathered wood. I've seen some talented people *paint* styrene to look like old wood, but painting is best suited to fairly well maintained buildings. Evergreen suggests a good technique to impart a "wood grain" on the styrene siding – sanding. This does raise some shavings if coarse paper is used but most of this can be eliminated by lightly sanding with a fine grit paper. Also, unlike traditional construction technique, you should assemble the shell walls *prior* to insertion of windows or doors *or* painting. The solvent works best on unpainted styrene. Painting thus takes longer than with wood kits due to the need for extensive masking. Spray painting is really a necessity for a smooth application. I did successfully brush paint the trim pieces but would not try it on the large walls.

Overall, this is a superb kit, well worth the $24.95 price. I highly recommend it. *Charlie Getz.*

Glass & Scriber
Clover House
P.O. Box 62
Sebastopol, CA 95472

Mention Clover House and you immediately think of wood strips and scale barrels. However, Clover also sells a neat little package of hard to get window glass. These glass pieces are .006 inches thick and 2.3 inches by 0.9 inches in size. Packages of 10 "sheets" of glass sell for $3.95. You can also order a 25 "sheet" package for $7.95. Once you have the glass you need some way of cutting it to size. So Clover provides a special pencil like scriber for $2.95. You can get the scriber and a 10 "sheet" package of glass for $6.45. Send for the new Clover House catalog for $.75. It is full of useful goodies. *Bob Brown.*

BULLETIN

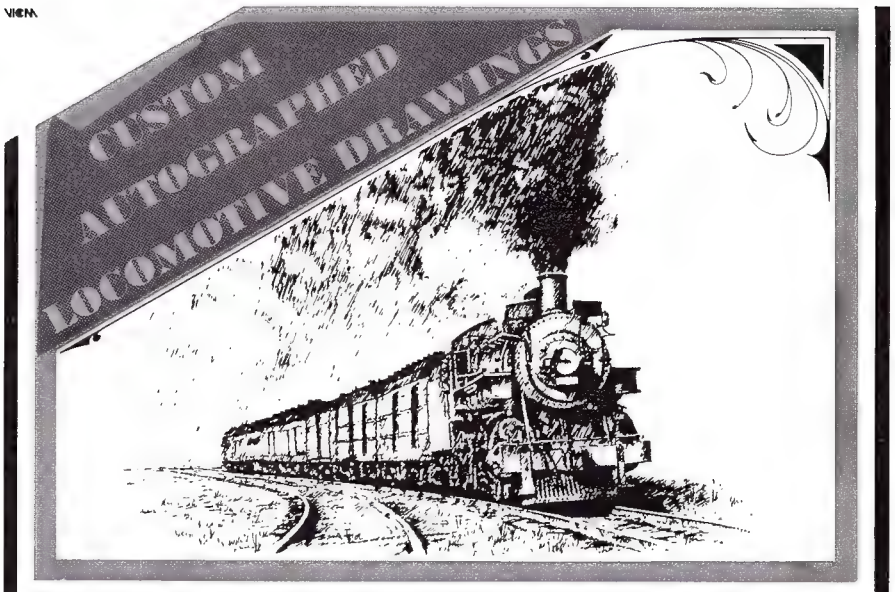
PFM recently sneak previewed their revolutionary new On3 track system for the **GAZETTE.** This system uses pre-slotted wooden ties. A tab projecting from the bottom of a cast brass tieplate is inserted in the slot. Code .100 rail is placed on the tie plate and a special tool crimps cast spikes over the rail, gauging it accurately. PFM claims that this system is faster than hand laying track. The new track looks prototypical. Special provision for turnouts are included in the system. More news and maybe pictures will be featured in the January **GAZETTE.**

O Scale Warehouse
Evergreen Hill Design
P.O. Box 396
Belmont, CA 94002

I have had this kit quite awhile and have not yet completed it. My reason is lack of time, not the quality of the kit. When I saw the Evergreen Hill Dollar Bros. Warehouse I knew I had to have one for Tuolumne Forks. The kit builds into a beautiful small warehouse. Actually it is not so small because it has two stories. Colin Emerson has assembled one of these kits so I know what it will finally look like on my layout. The building is about 40 feet by 20 feet but has additional width because of the loading platforms. These stick out on both sides. The kit is composed of fine basswood. The strips are color coded on one end for easy identification. I really find that this helps in constructing a kit. The kit comes packaged in layers. On top is a light cardboard printed template for one of the sides. Right under the template is the sheet of wood used for that side. Then comes another template and another sheet of wood and so on until you come to the bottom of the pile. You must cut out the templates, lay them on the scribed sheet wood and cut out the outside shape of the walls and the window and door openings. This takes quite awhile and I found it helped to do only a side per evening until all were cut out. The roof is covered with a light cardboard and then shingled with a sheet of very thin veneer. The veneer must be cut into strips and then cut into individual shingles and laid on one at a time. Tedious but very effective on the finished structure. All the doors and windows are plastic castings by Grandt. There are also some 55 gallon oil drums by Grandt. The hinges, stove pipes, and electric meters are soft metal castings. Four wooden barrels are also provided. The kit comes with six large pages of instructions and plans. These plans and instructions are of unusually good quality. They give details on finish and detailing as well as basic assembly. Three color prints are also included. Two show the completed structure and one shows how to cut the scribed wood. Two black and white cardboard signs are also provided as is acetate sheet for the windows. This kit will keep you busy for several weeks of pleasant assembly and will look good on any narrow gauge or short line railroad. The price of the kit is $44.95. *Bob Brown.*

On3 Car Bolster
Grandt Line
1040 B Shary Court
Concord, CA 94518

Grandt Line is now offering a well detailed plastic injection molding for the bolster of a D&RG hi-side gondola. The bolster represents a standard gauge type rebuilt into a narrow gauge bolster. It is part #118 and sells for $1.00 for four bolsters. *Bob Brown.*



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Light Iron Models
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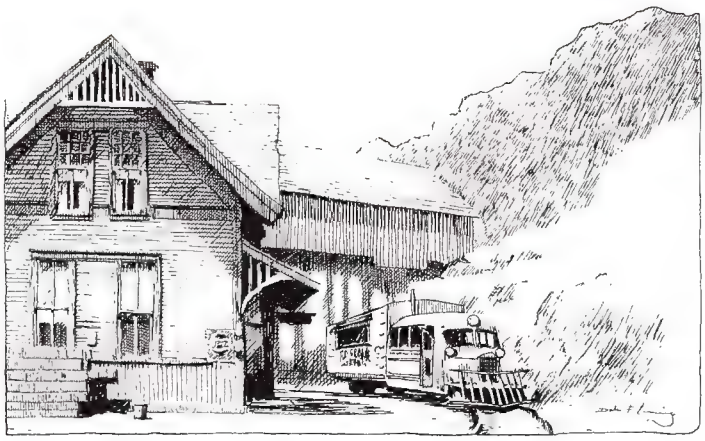
The Narrow Gauge SCENE



by Charles Getz

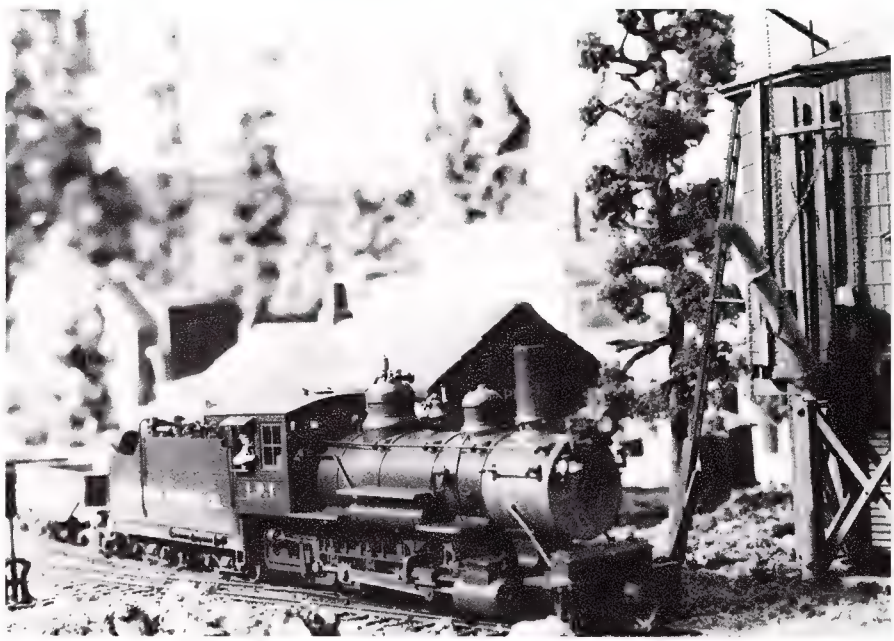
HOn3 Scene

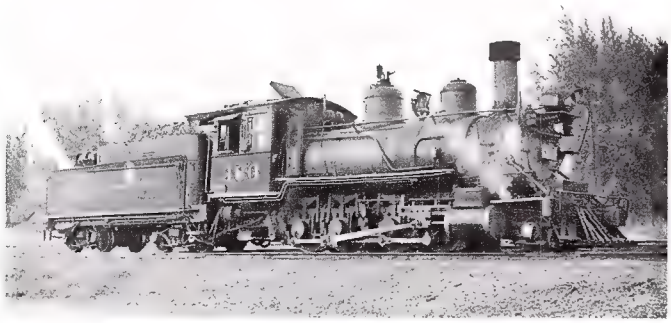
November is as good a time as any to get back into a snug basement or workshop to do a little serious modeling. And what better incentive to get cracking than a good old fashioned contest! With prizes yet! With the support of Model Die Casting, I take great pride in announceing the joint MDC-**GAZETTE** Great Locobashing Contest. It's all for fun and to encourage you to try your hand at kit bashing. The rules are pretty simple. All entrants should send me a long SSAE requesting the "official" rule sheet. Briefly, the idea is to take inexpensive MDC HOn3 engines and bash 'em into something else. The engines you must use are the new MDC's 2-8-0's in HOn3, either outside or inside frame. (This does not include the new 0-8-0T engine which is itself a kitbash!) Your model should be recognizable as coming from the stock engine, but there is no percent limit on parts you can use from other manufacturers – or scratch built. On3'ers and Sn3'ers can try their hands at HOn3 or you can convert your engine into an On2 or Sn21/2 or an HOn3 2-8-8-2, or just about anything else. Just don't get carried away and try to make a Shay out of it! Further, appearance is what counts, so don't feel obligated to work on the mechanism; it doesn't even have to have a motor. Please *don't* send your engine! Send sharp focus, black and white glossy photos (any size) and a brief description of the conversion to us. Photos should clearly show the engine by itself and not in a diorama or scenic setting. We just want to see the conversion, *not* your layout!

Judging will be done by the **GAZETTE** staff and will be based on originality and execution. Employees of MDC and the staff of the **GAZETTE** are prohibited from participating. Despite all these rules, this contest is designed to put the fun and fantasy back into modeling. We want everyone to give this contest a crack, and not feel the "experts" are going to walk off with prizes. And what are the prizes you ask?

First prize is a $100.00 savings bond and two-year subscription to the **GAZETTE**; second prize is a $50.00 savings bond and two-year subscription; and third prize is a $25.00 savings bond and one-year subscription. Three honorable mentions will get a one year subscription. Everyone who enters will recieve a certificate of appreciation suitable for framing. You can't lose, and could well win, so why not give it a try? The last date to submit entries will be July 1, 1979, with results announced in September.

For inspiration, I've included two pictures of C-21's by R. H. Kindig. There are numerous other ideas and in that regard





note also a few of Model Masterpiece's new diorama photos. (See Sept/Oct Narrow Gauge Scene). This shot shows Los Pinos Timber Co. #3, a MDC engine, with added detail by Forrest Van Schwartz, in front of a rebuilt Atlas water tank. The tank is very close to C&S narrow gauge dimensions! Another shot shows ore cars which are converted from Grandt On2 tram cars placed on HOn3 trucks. Clever! MM's Lyon depot and Gazette Kit are in the background. Good ideas for kitbashing and again demonstrates the usefulness of these MDC engines. Why not give this contest a try? Remember, just drop a long SSAE to me for rules and information.

Well, on to news. NorthWest Shortline has been active with their recent O scale Alco Minarets and the awaited "tiny Shay" in HOn3. New on the horizon is a 50-ton Dunkirk in HOn3. What is a Dunkirk? It's sort of a geared Edsel – a two-truck locomotive suspiciously resembling a Climax. Obviously very few were built, as it was not a popular engine. Unique to say the least, and the model will have guesstimated price of $200.00; expected early next year. The other NWSL engine is a small 45-ton, two-truck siderod G.E. Diesel in HO (?), with a guesstimated price of $80.00.

Elsewhere on the motive power front, Key Imports has a D&RGW C-17 in HOn3 coming from Korea soon. These are the folks who brought you the C-18 and C-19. So now you can have a C-16, C-17, C-19 and C-21. Sorry, no C-20's. (How about building MDC C-27?) Sunset's proposed Sn3 D&RGW K-28 is causing ripples of anticipation among the Sn3 crowd that may swell into waves of appreciation when it appears (unless I'm all wet). Also new from Sunset in On3 is another C-16, this one #268 (very limited), a C-18 and Rio Grande Southern 4-6-0 #25. Tomalco's Sn3 D&RGW diesel #50 should also be available now.

On the rolling stock front, Tomalco still has a few On3 C.O.N.X. #5 tank car bodies in brass (!) at $29.95. The modeler will have to add the flat car-underframe, but this is a superb value. Empire-Midland was so pleased by the success of their On3 cattle car, they're doing one in HOn3, also brass. Reader feedback on their stock car, or any new product is welcome c/o G.P.O. Box 1519, New York, New York 10001.

As of press time, I haven't seen the E&B caboose, but it should be available. Look for an early review in the **GAZETTE**. Many of the caboose parts will be offered separately, and the underframe will also be produced in a "flat car" version. Coming in February will be D&RGW coach #319 in either open or closed vestibule versions. Again, this will be followed by a variety of parts including trucks and roofs to fit wood kits. E&B is also doing some HOn30 trucks based on a WW&F prototype compatible with Kadee couplers. A real boon to HOn30 fans. Don't forget E&B's caboose and freight trucks in HOn3 too. Add to AHM's new "vintage" tank cars you'll have a good Gramps type tank quite easily.

In our abbreviated Products of Interest Department, NWSL has another useful tool called the "Duplicutter" for styrene work. Similar to the "chopper", this tool is designed to accept styrene sheets, and to facilitate accurate cutting. At $9.95, how can you go wrong? . . . The Structure Co.'s newest, Montezuma, Colorado post office in HO, is really nice. It's available with either milled or individual board and batten siding. Also planned is the Grand Central Gold Mine in HO, based on a Central City, Colorado prototype once served by the Gilpin tram. It's only 27 feet by 40 feet but interesting. Watch for it soon . . . Evergreen Hill Design has a new "O" scale structure coming – a gas station complete with gas pumps and tools. Sounds like a real winner. The HO slash burner is still planned, and is slowly being developed. A must for any sawmill . . . MR Weather has improved and expanded his fine line of pre-weathered rolling stock to include Kadee couplers. Available are box cars, refrigerator, tank cars, hoppers, gondolas, flats, and stock car. All HO, and a SSAE to P.O. Box 901, Defiance, Ohio, 43512 will bring details . . .

Westmoreland Car shops proposes to offer On3 open gondola or hopper cars handcrafted from wood. Owner R. W. Nimke would appreciate hearing from interested modelers as to possible prototypes. Drop a note care of RR #1, Wolpole, New Hampshire, 03608 . . . Liberty Models, 9601 E. 77th St. Raytown, Mo 64138, has re-released its "O" scale flat car kit. Based on a 1906 Ma & Pa prototype, this is a wood frame truss-roded car typical of short lines. Reasonably priced at $9.95 less trucks and couplers . . . SS LTD is now "SS LTD Industries" with David Heahn as president. Dave is from Minneapolis, is well versed in business practices, and is already shaking up the industry with factory-direct pricing to save the modeler substantial sums over retail prices. It will be interesting to see the effect of this innovation. By the way, last issue I erroneously stated that John Hermann was an "employee" of SS LTD. Not so, John is a talented independent contractor under the name of "John Hermann Scale Models" doing work for many manufacturers.

A new custombuilder Rico Grande Southern Shops, has a new engine painting and kit construction service. Under the name of "Silver Ledge Model Co.", owner John Hitzeman also hopes to offer the Red Mountain depot on the Silverton Northern, in HO-HOn3, featuring epoxy cast walls, Kappler wood, Grandt castings, and Campbell shingles. Price around $50.00. It may also be available in O and S soon. This will be followed by a ten and twenty stamp mill, working ore-tram kit, and perhaps some narrow gauge rolling stock. Rico Grande Southern and Silver Ledge Models can be reached at 808 Le Pere St., St. Louis, MO 63132.

APAG Models has been renamed. It will be called "Sequoia Scale Models." Their first release under their new name is a new blacksmith shop. This pleasing kit will feature Kappler wood and metal casting for the interior . . . Late News flash! Original Whistle Stop is going to produce On3 passenger cars in epoxy with trucks and all for about 35 to 50 dollars! All of the D&RGW cars from baggage to parlor will be done. See their ad and watch this column for more news. The poll in this column a few issues back resulted in this product so your voice *is* heard.

In the news, Clover House has purchased the Simpson line of structures (not

rolling stock) and I'm glad to see this fine line of distinctive HO and O structures continued. Model Masterpieces has obtained the metal detail casting line of Timberline Products (not the structures). MM promises to increase the line with new releases. Send an SSAE for a list of these nicely rendered detail castings. We'll be reviewing them soon.

As long as we're discussing Model Masterpieces, their new ¼ inch Gunnison depot is unique in many ways. Besides the plaster stonework (laboriously created from inidividual stone masters) and special Grandt castings, MM has developed a new ¼ inch shingle material – strips of self-adhesive pecan veneer. Just peel and press, similar to Campbell's popular HO shingles. These patended "Masterwood Shingles" available soon separately, could dramatically ease this tedious job for quarter-inch aficionados. One more reason to acquire the limited-run Gunnison depot at $49.50. More ¼ inch buildings on the way.

If that isn't enough, MM's Como wrought iron turntable should be available soon. Ditto on "Cimmarron Supply", a two-story brick building with interchangeable sides. New detail parts include a motor-driven centrifigal pump (2) for $1.25 and a 6 foot band saw with either single or double edge blades. All in HO.

In the Book Nook, prolific Mal Ferrell is at it again! Besides *West Side, Utah and Northern*, and *Colorado and Southern* (see last issues' column), his latest plans include two volumes, *Denver and Rio Grande – The Glory Years* to be published by Pruett. Lots of photos ought to make this a must for old Rio Grande fans. To be fair to all, Mal is also busy researching a *Southern Pacific Narrow Gauge* book, about 200 pages. Any sources of information or photos would be appreciated. Write Mal care of Pruett Publishers, 3235 Prairie Ave., Boulder, Colo. 80301. I still wonder how he does it! And him a pilot yet!

Sundance Publications Ltd. announced a new series of volumes on the Sandy River and Rangeley Lakes Railroad. Called *Two Feet Between The Rails*, this two-volume set will cover the entire line. Vol. I will contain 416 pages, 500 illustrations, and 130,000 words. Whew! Publication of Volume I is estimated on December 1, 1978, at a price of $35.00. Volume II will be published in July, 1979, with over 1400 illustrations. Noted two-foot authority Robert C. Jones is the author.

How many of you caught the notice in last issue in the Caboose Hobbies ad that the Rocky Mountain Railroad Club's epic, *Switzerland Trail* is going to be republished? This rare book on the Colorado Northwestern has commanded prices exceeding $200.00; now it can be yours for $32.50! Bravo! Flash! See the Robinson Press ad in this issue. How about re-doing *Colorado Midland* or *Rails around Gold Hill*?

Speaking of the Rocky Mountain Railroad Club; I've just joined, having always been interested in this fine organization. It sponsored some historic fan trips in the twilight of the narrow gauges, and even managed to obtain equipment, including legendary RGS #20. The club today is extremely active, hosting numerous railfan events behind steam. It occasionally publishes learned works, all of which have become treasured items, avidly sought. Founded in 1938, the club still meets in the Denver area once a month, and publishes a newsletter of events and happenings. Membership is only $6 a year (plus an initiation fee of $4). If you want to be part of an historic organization and contribute to its most important work, why not join? Write to the Rocky Mountain Railroad Club, P.O. Box 2391, Denver, CO 80201, and tell them member 1188 sent ya (that's me!). Do it now.

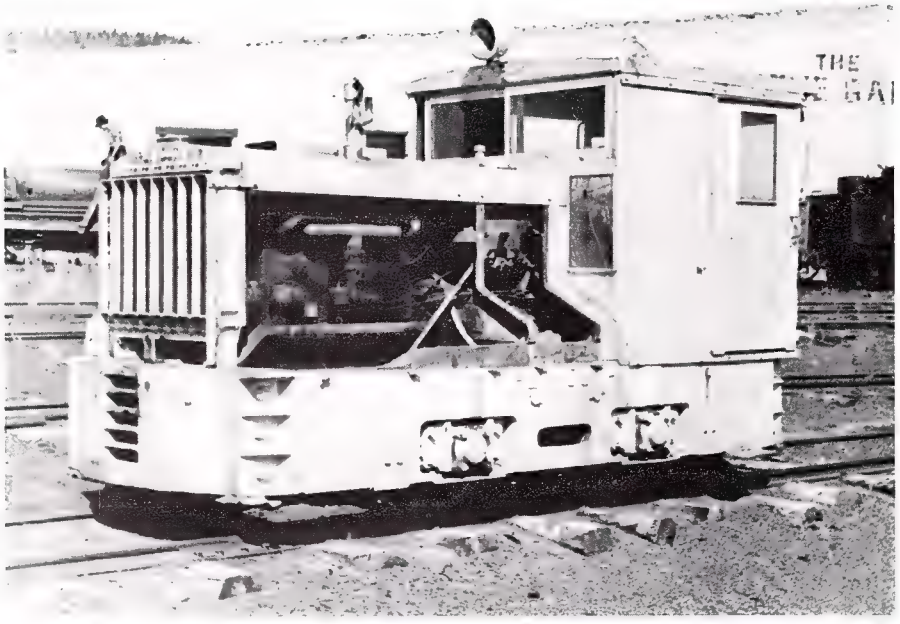
For those of you who take model railroading seriously, do not, I repeat, do *not* subscribe to the ASODCO Coupler! "ASODCO" stands for the American Society of Dummy Coupler Operators, and its newsletter is a riot! Edited (?) by Frank Pearsall, the society is unique by any criterion. Dues are $1, the membership is limited to 100 and besides an editorial and letters to the editor, the "newsletter" is pretty skimpy, but funny. ASODCO members are noted for their distant aloofness. Anyone evidencing any interest in joining is immediately placed on a permanent waiting list and considered suspect. If you want to try, send your buck, the end label from a Paige Enterprises kit, and an essay on the true meaning of the ASODCO slogan, "Model Railroading is Dead Serious" to ASODCO, Box 1605, Manassas, VA 22110. Please don't use my name when writing.

In the "Help" department, George W. Chambers, Box 606, Sultan, Washington 98294, needs information on the color scheme of Sumpter Valley diesel #101 (ex-D&RGW #50). Readers should contact George directly.

In the Notices Department, the Pacific Southern Railway is holding its 15th annual exhibition on December 2, 3, 9 and 10, 1 p.m.-5 p.m. at the Gamma-Tech Bldg., Route 206 and 518, in Rocky Hill, New Jersey. Cost is $1.50 to benefit the Rocky Hill Fire Co.

The Slim Gauge Guild is holding a rare open house on Sunday, December 3rd from 10 a.m. to 5 p.m.; its first since 1975. The club is renowned for its scenery, about two-thirds completed, with such attractions as the Ophir Loop, Georgetown Loop, and Alpine tunnel. 90 percent of the planned 8 miles of track are in place. Information can be obtained from Tom Pollock, 131 S. Madison Ave., Monrovia, CA 91016; (213) 358-8678 (8-10 p.m., Pacific Time). The club is located at 1275 East Colorado Blvd. (Where else?) Pasadena, CA.

In our Narrow Gauge Notes Department, Mal Ferrell has helped clear up a mystery. Those of you with *Colorado Rail Annual #12* on the South Park may have noted a strange machine in Como Yard, circa 1938 (page 242). Under close examination, it appears to be a diesel. A diesel on the narrow gauge South Park! Well, Mal Ferrell with Pruett Publishing Co.'s help, sent a picture and indeed, it is a narrow gauge Plymouth belonging to the dismantler of the South Park Line. Try this one as a trivia question!



Well, between the contest and the news, you should have enough to tide you over until January. Holiday Greetings to you all – write if the mood strikes.

Charlie Getz
845 Ridge Ct.
So. San Francisco, CA 94080

Upgrading Your Sound System

Part 3: Sound System Installations

by Gordon North
photos by the author

Introduction

If you have a PFM sound system, you received an excellent handbook on installing the PFM sound components in your locomotives. Everything that you need to know to install the PFM components in your tender type locomotives is explained there in great detail. However, here I will describe some alternative methods and components that may offer certain advantages. Charlie Eckstein and I have spend a good deal of time over the last five years improving our own sound operations and in installing systems in locomotives that required different approaches than those described by PFM.

All of my own installations were made using components available from most electronic suppliers (Radio Shack, Poly-Paks, Olson, etc.) instead of using the PFM Locomotive Tender Module (LTM). Each installation, or locomotive design (my locomotives are all scratch-built) was optimized by using special methods and components. While tender locos seldom require an unusual installation, geared and tank locos can be very difficult or downright impossible – especially in HO.

Before getting to specific details, it may be helpful to review the operation of the PFM system and to point out the use of the various components. Figure 1 shows how the dc voltage from the throttle, the audio, and the RF synchronizer signal are mixed together and applied to the rails. Mixing the signals instead of using one of the modulation techniques allows them to be easily separated in the locomotive with simple filters. The synchronizer periodically connects a capacitor across the rails to short out the RF signal. The reduction in amplitude is sensed in the sound system to trigger on the exhaust beat. The length of the beat is adjusted with the cut-off control and is independent of the width of the contact sections, provided they are narrower than the shortest desired exhaust beat. You can see that there are three independent circuit paths in the locomotive, the motor, synchronizer, and the speaker. Since the motor is primarily an inductor with an impedance proportional to frequency, it will offer the highest impedance to the RF signal and the lowest to the dc motor current. While considerable audio power can be wasted by the motor, this waste is neither harmful nor important. The sync capacitor blocks dc and is a relatively high impedance to the audio, so its only effect is on the RF. The speaker is low impedance to all three signals. A large value capacitor is needed to block the dc and pass the audio, and an RF trap (parallel capacitor and inductor) provides a high impedance to the RF signal. You may recall that a trap may be necessary with low inductance motors and car lighting methods as mentioned in the PFM handbook. Not shown on the diagram are the lighting components (to be discussed later).

The importance of optimizing the running quality of your locomotives cannot be emphasized too strongly. Any extraneous mechanical and electrical noise will seriously affect the realism that is provided by sound. The necessary running qualities can be achieved with improved motors and gearing methods. The necessity of such replacements is frustrating when you've already paid out gold for brass. Fortunately, the newer imports have improved dramatically; some run flawlessly right out of the box. In any case, clear up any basic mechanism problems and determine whether the drive must be replaced. Since there has been much in the literature about re-powering, I will address the subject only briefly here. I have used micromotors, with either integral or snap-on gear heads, and various Grandt bevel gear sets for all of my own locomotives and I doubt if I'll ever settle for less. Others have had good success with some of the less-expensive can motors with conventional worm gear drives. If you are scratch-building or kit-bashing, make sure you don't scrimp on the mechanism. You will only have yourself to blame if the running quality is not all it could be.

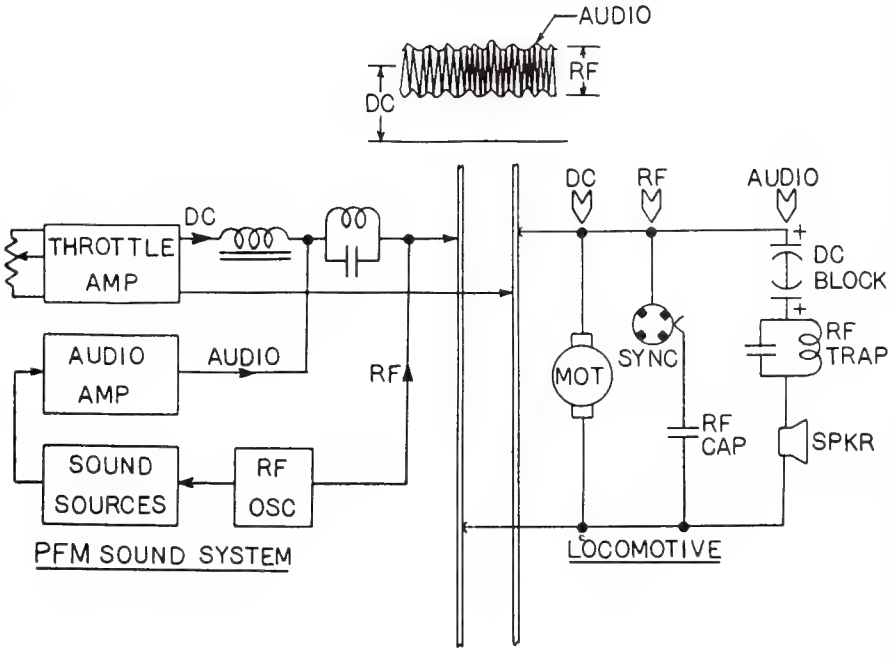


Fig. 1. This block diagram shows how the throttle dc voltage, the audio, and the RF sync signal are added together and applied to the rails. It also shows how the signals are separated in the locomotive. The complete independence of the three circuit paths can be used to advantage in finding space for the individual components.

The Synchronizer

The sound system component that I felt needed the biggest improvement was the synchronizer. While it is the speaker and its mounting arrangement that will determine the overall sound quality, an unreliable synchronizer will destroy the realism and cause much maintenance anguish right off the top. While claims for reliability have been made for the PFM paint-on method, and certainly it will work if done properly, I seriously doubt if anyone would call it the ultimate way. The methods here, while not "ultimate" either,

have proven their worth over several years of use. They require some ability beyond "cut and paste" but not a master machinist.

The synchronizer can be on the driver inside face, as in the PFM approach; or can be some type of axle mounted cam. The type of synchronizer is determined by the availability of unobstructed space on the locomotive's axles. All of my early locomotives were of the solid bar-stock, inside frame type and required the driver mounted method. Figure 2 shows a printed circuit board (copper clad laminate) pattern used in a similar way to the paint-on method. There are many very thin laminates available that have been developed for multi-layer circuit boards for high density interconnection of integrated circuit packages. Manufacturers include USP, Westinghouse, G.E., and 3M etc. Various dielectics, such as glass/epoxy, mylar, and teflon, are used with a variety of cladding combinations. Double-sided cladding is preferred, with a fan bladed pattern etched in one face and attached to the inside driver face with ACC cement as shown in Figure 2. All of my present rod-type locos are equipped with this synchronizer and it has proven to be trouble-free and easy to install. (See Photo 1.) This approach is not practical for everybody but it's certainly not impossible. It could be commercially produced simply and inexpensively. It isn't, however, the universal answer in that it is primarily suited for solid frame locos where the opacity of the pattern would not be noticeable. This leads us to the axle-mounted versions.

The axle-mounted cams can be divided into two types: the press-on type, and split cams that do not require any disassembly to install. All of my own efforts have been on the press-on type; as they, with the pc type, meet all of my own requirements. Several different types are shown in Photos 2, 3, and 4. While these

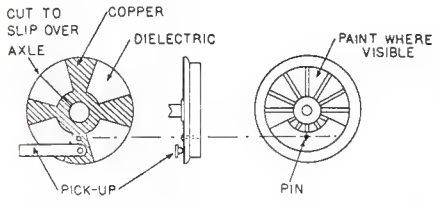


Fig. 2. The installation of a printed circuit synchronizer. The pattern is cut through to the center hole to allow it to be slipped over the axle and ACC'd to the driver inside face. A pin is driven into a press fit hole in the driver and pattern to provide electrical contact. The pattern could be mounted on a blind driver or a light cut could be taken on the driver to minimize any problems that could be caused by the additional flange thickness.

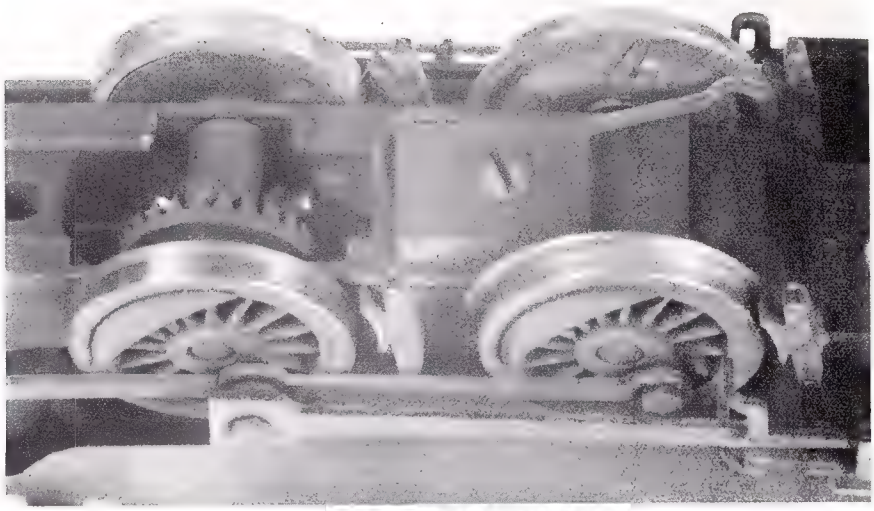


Photo 1. The printed circuit synchronizer is mounted on the top right driver. The contact pin can be seen at the top segment. The pick-up that appears on this On30 10 wheeler is an early type used and will eventually be replaced with the button type that appears in the other photos. The Grandt bevel gear drive that provides noiseless operation appears on the left axle.

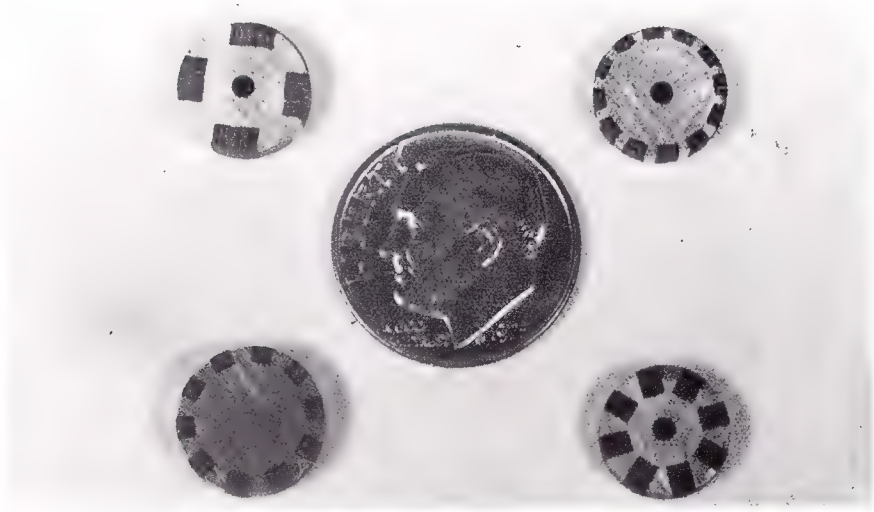


Photo 2. A variety of small ⅜ inch diameter press-on synchronizers are shown. The 8, 10, and 12 segment cams are for use on various Shays, while the 4 segment version is used primarily on rod locos. Press-on are preferred when removing a driver does not cause any problems of re-quartering, etc.

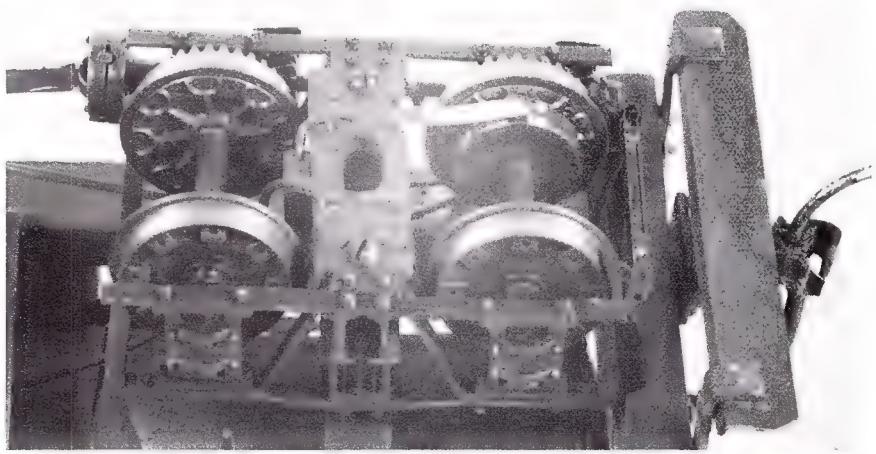


Photo 3. A 10 segment cam and button pick-up are shown installed on the author's On30 Shay. Both the pick-up and flange wipers are soldered to a piece of pc material that is screwed to the bolster. The small, 0.200 inch square sync capacitor can be seen to the left of the bolster.

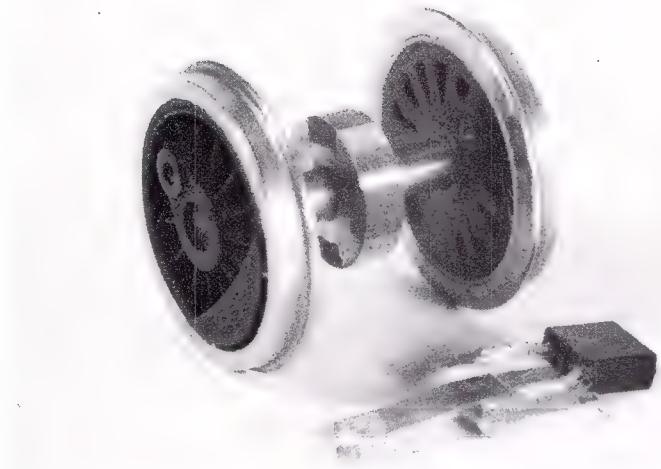


Photo 4. A 4 segment cam was pressed on the axle of a Tyco driver set. Since a score line on the axle makes these sets self-quartering, the use of this type cam is ideal. The pick-up and sync capacitor are soldered to the pc board which will be epoxied to the locomotive frame.

Photo 5. The split cam can be attached to the axle without any disassembly of the mechanism, which makes it ideal for the intricate K-series outside frame prototypes. This version is the latest style made by Charlie Eckstein, and can be made entirely on a Unimat or other small lathe.

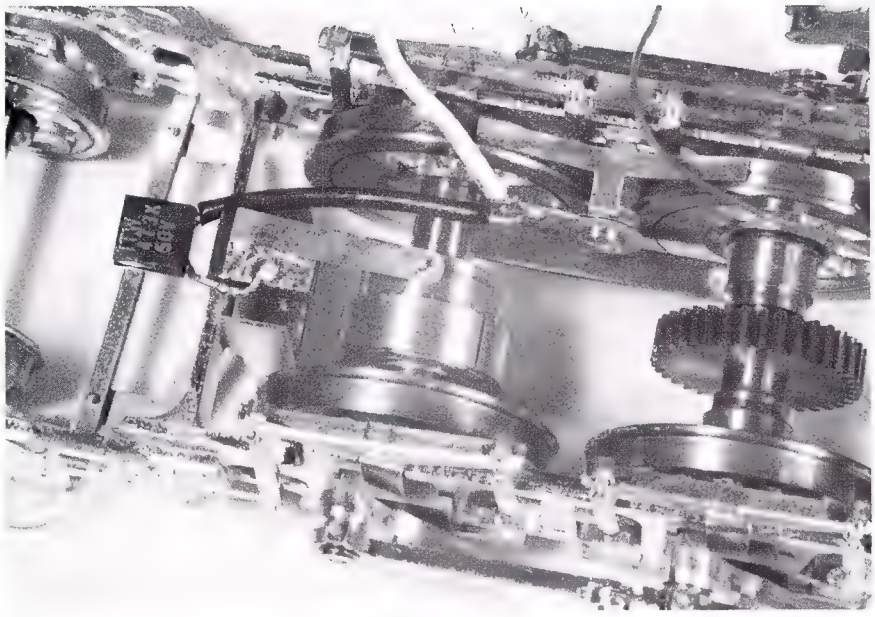


Photo 6. An earlier version of the split cam can be seen on an On3 IHM K-27. This type is slightly larger than the latest version and has the insulated segments filled with 5 minute epoxy.

can be made individually with hand tools, I normally make them in quantity with the use of a lathe and a milling machine. A brass rod is held in an index head, that is set for the proper number of segments, and slots are cut with a slitting saw or an end mill. Bakelite strips are ACC'd into the slots, and the rod is turned on the lathe to smooth the surface. The axle hole is bored and the individual cams are cut off to the desired width. Those shown are about ⅜ inch diameter by ⅛ inch wide. The 4-segment type is used on rod locos and on my Climax, where it is mounted on the crankshaft. The 8, 10, and 12 segment cams are used on Shays, where the 8 and 12 segment types are for two and three cylinder Shays, respectively, with 2:1 truck gearing. My own 2 cylinder Shay has 2.67:1 truck gearing that requires a 10.67 segment cam. Obviously I compromised to 10 segments. While this is an ideal cam for Shays, removing a wheel for installation for a rod locomotive can lead to quartering problems. My own On30 rod locomotives use TYCO driver sets that have score lines on the axles for indexing the wheels. That's one of the reasons that I'm into On30 – self-quartering driver sets for $1.65 are tough to beat. Two rod locos with open frames are in the early construction stages, and this cam has already been installed for both. When you are scratchbuilding, you are often faced with quartering to begin with, so this cam can be used without any additional effort. Adding the synchronizer to an already-built locomotive can be scary if disassembly is required. This brings us to the split cam.

Charlie has put most of his effort into this type of cam, as he has several On3 K and C class locos that could be a disaster to strip down. His early versions were simply machined in two halves from rectangular bar stock, similar to the press-on type, and ACC'd together around the axle. While these have worked well, he recently has come up with a clamp-on type that can be machined entirely on a small lathe (Photo 5). These are also made in two halves from rectangular bar stock, but a hub is turned on one end. A C clamp is turned to fit over the hub, and a screw between the open ends of the "C" clamps the two halves together and to the axle. The cam area is turned to a considerably larger diameter than the finish size. Four equally spaced holes are drilled into the cam face on the finish diameter and Bakelite rod is ACC'd into the holes. The final diameter is then turned to expose the Bakelite segments. These were recently installed on several On3, K-27 and K-28 locos with excellent results (Photo 6). The only drawback I can see is that the relatively large size may preclude the use on HOn3 locos. My guess as to the minimum practical size is about ⅜ inch diameter by 3/16 inch wide, but a lot depends on the axle size. The On3 versions were about ½ inch diameter by ⅜ inch wide. Of course,

using sound in HOn3 is a significant problem from many viewpoints.

The only thing that is common to all three of these synchronizers is that they all provide continuous contact for the pick-up. While I have seen a few well-performing synchronizers using momentary contact, I have always felt that because of contact bounce, alignment difficulties, etc., that continuous contact was the preferred method. While PFM and others use wire pick-ups, I much prefer strip spring stock, such as beryllium copper and phosphorous bronze. This material is easy to obtain, the GH Product's Axle Wiper kits are a good source of pick-up material. You get 10 wipers that will make 20 pick-ups for $1.25. A contact point is made of 1/16 inch brass rod. The end is formed to a smooth, round point (button) and is soldered into a hole in the end of the strip. The excess length protruding from the back is cut off and filed smooth. The finished pick-up is soldered to a piece of pc material and attached to a convenient place on the frame or to a bracket that you may have to provide. The cam should always be added to the axle or driver that provides the most convenient attachment point for the pick-up. The capacitor used with the synchronizer can be made part of the pick-up assembly, or mounted in any other convenient location. Capacitors of small physical size are more easily mounted and are readily available. The largest one that I have used is 0.2 inch square by 0.1 inch thick, and the smallest is ⅛ inch x ⅛ inch x 1/16 inch. Erie "RED CAPS" are one of the more reasonable types that are available, but you'll have to go to a major electronic supplier — not a Radio Shack or equivalent.

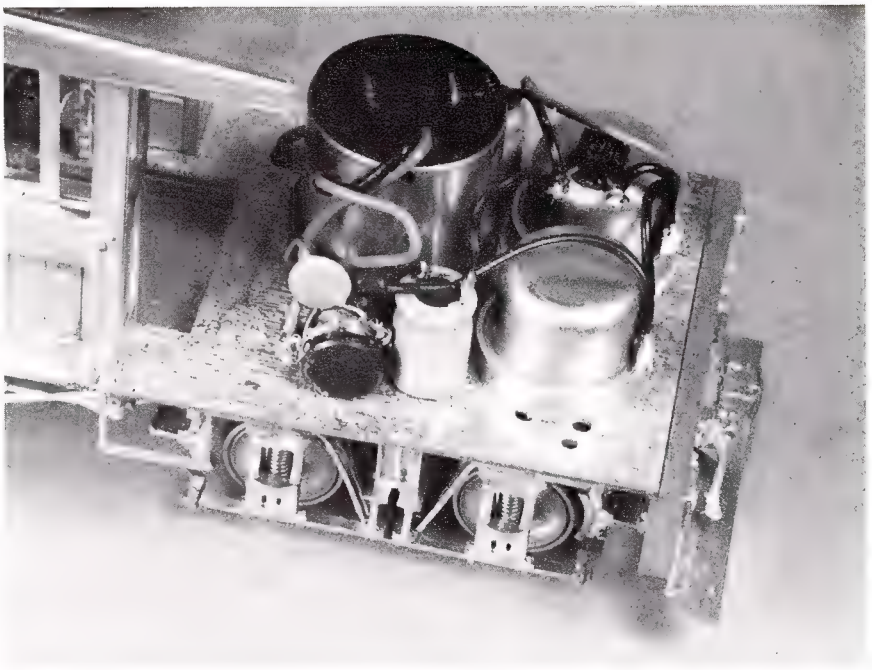


Photo 7. The installation in this IHM On3 16 ton Shay shows how the individual components can be attached separately with epoxy where it would be impossible to fit in the LTM board. Two Lambert ¾ inch diameter speakers were wired in series for better power handling capability where no other single speaker would fit. The RF trap and one dc block capacitor are on the front side with the second dc block capacitor on the far side. The sync capacitor is epoxied to the top of the rear speaker.

The Speaker

The speaker is the most difficult component to find space for, and it and its mounting will determine the overall sound quality and volume. PFM's instructions are basically on how to mount their LTM and speaker into an HO scale tender. This 1½" inch speaker is as good as anything I have come across, regardless of size. Its large magnet structure and sharp cone angle make the overall height quite large; considerably more than most small speakers that you find in radios, tape recorders, and other small portable equipment. While this accounts for its quality sound, its height could cause problems in even On3. It just cleared in a K-27. While the width can be narrowed considerably, you can't shorten it. Since I started into sound without the PFM components, I spent considerable time searching the electronic market for usable, low cost speakers and other components. If you are in O or On3, where speakers 2" and larger can be used, then virtually all of them are acceptable – provided that they have 8-10 ohm voice coils. There are few speakers smaller than 1½ inch to choose from. All that I have tried, have had considerably poorer performance than the PFM metal cased, 1 1 inch x 1 inch x ⅜ inch speaker. There are two versions: the PFM-10 face ported, and the PFM-11 edge ported styles. These have allowed us to have excellent sound in Shays and other small geared locos, small tank types, and other locos that do not have space for any other installation. These speakers are expensive, with the latest price being $13, but for those special installations, you can't beat them. The smallest speaker that I have seen is the ¾ inch speaker that is made for the Lambert sound system. These are available separately for about $5. While the sound quality is surprisingly good for its size, its power handling ability is quite limited. The PFM system will easily damage them at normal power settings. Charlie did the original installation in the IHM 16 ton Shay shown (Photo 7). He used one speaker and it lasted about an hour. I felt that, by spreading the filter components around, that two speakers would fit. Wiring them in series results in one-fourth the power in each speaker for the same volume setting of the sound system. I redid the installation as shown, and although the sound quality is not up to the standards that we have come to expect, it is acceptable and provides a margin of safety for the speakers. In this case, the two speakers fit where no other single speaker would. However, there *are* cases where certain modifications to increase space can be made that do not detract from the locomotive appearance. These include converting wood or coal bunkers to oil to provide more enclosed height, or lengthening a Shay firebox. I normally would rule out an installation that was not consistent with the level of detail of a given model. For instance, I would not put a speaker in a loco cab that was detailed. If it was not detailed and the motor already showed, then perhaps I would consider a speaker installation if there were no alternatives.

My own On30 models provide only a little more room than HO locomotives, and all of my tender installations have required cut-down speakers. My own experiences have generally agreed with PFM's that cutting down a speaker can actually improve its performance. This comes about because of the resulting increase in the compliance of the cone to provide improved low frequency response. There are other limits and restrictions, however. For any speaker, the maximum travel is limited by the cone and voice coil suspension, the voice coil length, and the magnetic properties, to name a few. The shallow, short magnet designs will typically allow less excursion and will therefore have less output power and limited low frequency response. The advantage, of course, is the smaller space required. The PFM speaker, with its deep design, may show an improvement when cut down, but don't expect it in all cases. You will get the speaker to fit where it would not otherwise, you may get an improvement, and the performance will not be degraded until you have significantly reduced the cone area or caused some mechanical damage. I have successfully cut down quite a few

speakers, ranging from 1½ inch to 3 inch.

My method for cutting the speakers differs slightly from PFM's directions. Since the main concern is cone damage and stress on the voice coil suspension, I cut the cone first, with a sharp knife, on a line just inside the desired final width. Then the speaker frame is cut through from the back with a razor saw, with the speaker on a flat surface. Pieces of styrene or cardboard are then epoxied to the frame to enclose the sides. This is to prevent the back wave from leaking through to interact with the forward wave. Since the cone was cut narrower than the frame, it will not drag on the side pieces.

Instead of suspending the speaker in the tender body with foam, I prefer to attach it to the tender floor. In this manner, the speaker, filter components, and wiring are all an integral part of the frame assembly. I originally used Pliobond to attach the speaker to the floor, but recently switched over to double-sided tape on a hint from Charlie. Removal is simpler and the adhesion is entirely adequate. I have not found that filling the tender with foam, or other accoustically absorbant material, provides a significant improvement in the sound quality. I suggest trying it both ways, and go with whichever method sounds preferable to you. If you try the floor mounting method, then you can easily make this check. While there is no way that an enclosure the size of a tender body would ever be an optimum match for any speaker that you could use, its effect on the sound can be extremely dramatic. I recently did the speaker installations in two On3 Sunset K-28's. I had the PFM speaker and components for one, but had to provide everything for the other. I tried out several speakers on the bench, including the PFM speaker which sounded much better than the others. I then tried them all in the tender, and was unable to hear the slightest difference in sound quality or volume between any of them. The group included several 2 inch and 2¼ inch speakers plus several larger ones that had been cut down. Enclosing the speakers improves the sound. Even small fuel bunkers can dramatically improve sound. Once you have restricted the sound transmission to one surface of the cone and enclosed the other, then the greater the enclosure volume the better. The PFM-10 and 11 and the small Lambert speakers will not be improved in an enclosure since they are already in cases. Photo 8 shows an assortment of speakers that I have investigated and covers the range of sizes that can be used.

PFM covers in good detail the cutting away of the tender subfloor, brackets, etc., to allow the necessary room for the speaker. Not mentioned, however, are the two tools that I have found the most useful for this work. They are the "nibbler" and the motor tool (Dremel or other) with a router bit. I start out with the nibbler to cut the rough shape of the opening required and then finish up with the router and a file. If there is no room to use the nibbler, all the work is done with the router. Problems can arise in drilling the speaker port holes. If you have ever drilled a hole in sheet metal (especially brass), you have been aware that a standard twist drill likes to grab just before it comes through, and the bigger the drill in relationship to the metal thickness, the worse the problem. There are ways to regrind the drills to improve the situation, but frankly, an easier solution is to simply drill many smaller holes. I use about a 1/16 inch drill in a low torque motor tool, and have found the flex cable tool that attaches to my Dremel jig saw to be the handiest. Most of the holes are drilled from the bottom with the tender floor on a wood block. Other holes can be drilled from the top afterwards if a stop is used on the drill to prevent hitting some of the detail below. If you are starting from scratch, it would be smart to drill the pattern in the floor before assembly. You could even cut a single hole that is the diameter of the cone.

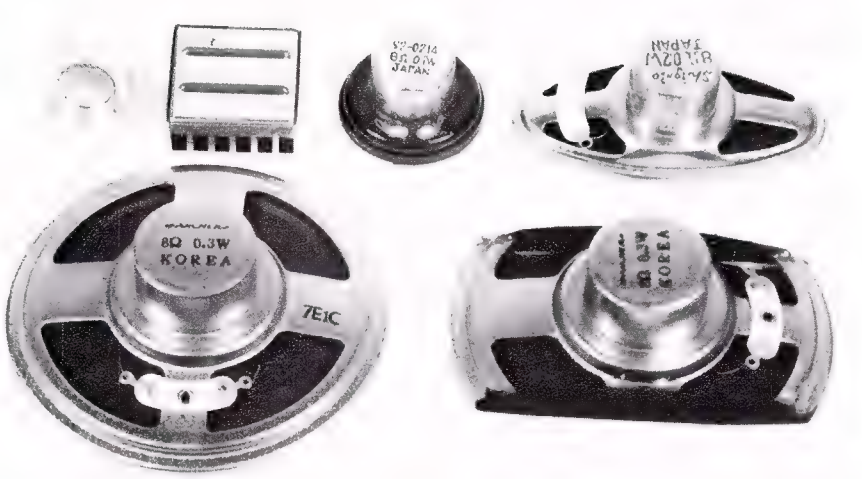


Photo 8. An assortment of speakers that have been used or investigated is shown. Clockwise from top left are the ¾ inch Lambert, a PFM edge port, a 1 inch Calectro, a 1 inch x 2 inch oval from PolyPaks, a 2¾ inch cut-down speaker from Radio Shack, and the same speaker un-cut. The Radio Shack speakers range from 2 inch to 3 inch for under $2. While the standard 1½ inch PFM speaker provides excellent performance, many similarly sized speakers can be found at bargain prices and will perform well in tender installations.

The Lighting

Besides the speaker, the filter components to block the dc and RF signals from the speaker are also mounted in the tender (or anywhere there is room in tender-less locomotives). The LTM contains a small pc board with the filters and a diode bridge, for use with constant intensity lighting, mounted on it. The bridge is connected so that there are two pairs of series-connected diodes that are in parallel but with reversed polarity. This arrangement provides a fairly constant 1.5 volt drop for current in either direction, and the lamps are connected across the bridge. The bridge is then connected in series with the motor, which acts as a ballast to absorb the rest of the track voltage and to supply the necessary current. Unfortunately with the growing use of very low current motors, this method of providing constant intensity lighting is becoming obsolete. Lighting must now be either a completely separate arrangement, or some sort of additional ballast is necessary across the motor. Neither of these approaches has been very attractive because of the additional space required and the significant power (and heat) that must be dissipated. If you happen to be using motors that make the lighting system operable, then you can follow PFM's wiring instructions. If not, then you have three choices; (1) follow the wiring instructions but leave out the lights, (2) remove the diode bridge altogther, or (3) remove the bridge and mount it up with the motor. Since (2) and (3) eliminate one wire between the loco and tender, then these choices are more attractive. Choice (3) raises the starting voltage of the motor which does have certain advantages. I prefer this method, if lights are used, in that it eliminates the problem of blowing out the headlight when testing the locomotive without the tender. Also if there is only a headlight, it will save a wire to the tender. Much smaller bridges can easily be found at prices under a dollar. Radio Shack and PolyPaks are two good sources of TO-5 cased units (0.30 inch dia. by about ¼ inch high). The plus and minus

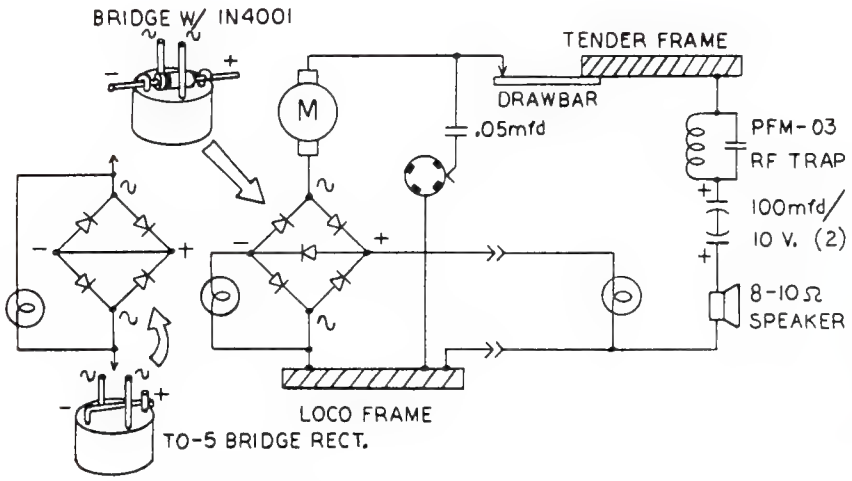


Fig. 3. The wiring diagram shows several methods of connecting a diode bridge to provide either constant or directional lighting. The bridge on the right (in the circuit) provides directional lighting while the left bridge is for constant lighting. It is preferable to mount the bridge in the locomotive instead of the tender for several reasons. All installations require the one wire from the locomotive frame to the speaker circuit in the tender, and one additional wire for a tender light. If lighting is not used or if the motor starting voltage does not need to be raised, then the motor is connected directly to the locomotive frame.

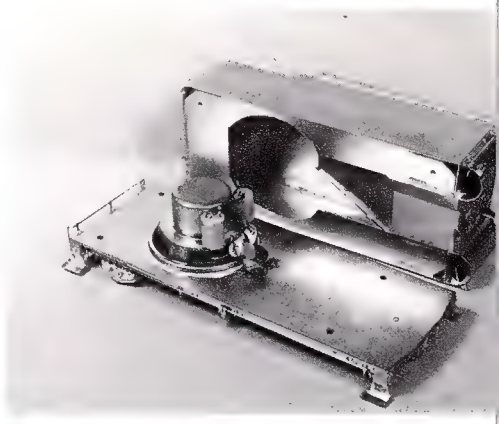


Photo 9. The PFM speaker, with the filter components epoxied to the speaker frame, is shown in the IHM K-27. This is often a much simpler method than attaching the LTM circuit board. The speaker is held to the floor with double-sided tape.

leads are connected together and attachment is made to the two ac leads. It can be connected in either motor lead, and can be attached by soldering one of the leads to a terminal or epoxying the body to the frame or motor. Figure 3 shows ways of connecting a diode bridge to provide either constant or directional lighting.

Arrangement of Components

As shown on the 16 ton Shay (Photo 7), the filter components are often removed from the pc board and epoxied to the floor or speaker frame. For other installations, a specially shaped board may be desirable, or the PFM board may be trimmed to fit. While I normally use components from local electronic suppliers, the main advantage is strictly convenience. If a local hobby shop carried the full PFM line, I would probably use their components. With the exception of the sync capacitor that was previously mentioned, the remaining components are as small and inexpensive as you will easily find. I have gone to considerable trouble to make my own RF traps, so whenever I run across PFM's, I will usually stock up. When you remove the capacitors from the pc boards, make sure you mark the polarity, as this is often not shown. If you purchase capacitors separately, get at least 100 mfd at a 10 volt or higher rating. Connect them together, either plus to plus or minus to minus. There are circumstances where the "short, fat" upright leaded type, like PFM's, will not fit. Longer, but smaller diameter, axial leaded capacitors are available. When you are adding sound to a tender-less locomotive, you will often have no choice but to use the components separately, so just fit them in where you can. It doesn't matter where they are mounted as long as the capacitors and trap are in series with the speaker, and the diode bridge (if used) is in series with the motor. Remember it is possible to rearrange the PFM LTM or use separate components. Do not restrict your thinking to the PFM LTM configuration. As you can see on the IHM On3 K-27 (Photo 9), I did not use the board in such a large tender. It was much simpler to just epoxy the capacitors to the speaker frame, and use the trap as the connection to the tender floor. Photo 10 shows one of my own On30 geared locomotives to demonstrate how the sound installation can be incorporated into the design of the model to optimize the space allocation of the various components. This Climax was designed as a Tee boiler locomotive so that the micro-motor could be mounted (and hidden) in the vertical boiler section. This freed the fuel bunker for the sound components. The PFM-11 edge ported speaker was epoxied to a bracket and a small pc board connects the speaker and other components together. The firebox of a Shay was made wide enough to mount the PFM-11 horizontally (Photo 11), ported fore and aft, but a PFM-10 mounted the same way would also be acceptable. The filter components were mounted on a pc board that was epoxied to the top of the speaker. The speaker was then epoxied to the bottom cover (which could have been made to look more like an ash pan), and the whole unit snaps in place. By making certain design compromises such as these, both the motor and sound installations can be completely hidden.

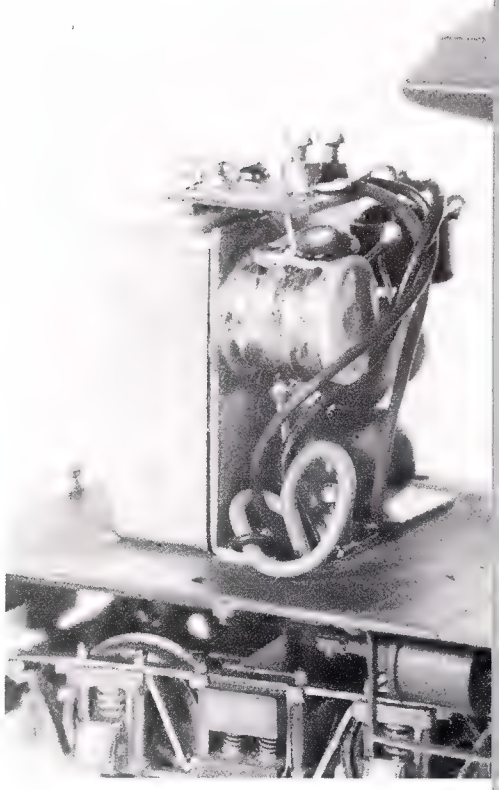


Photo 10. A bunker installation in the author's On30 Climax is shown. The PFM-11 edge ported speaker is epoxied to a bracket, with a small pc board attached to the speaker terminals. A TO-5 diode bridge, a home-made RF trap, and two dipped tantalum dc block capacitors can be seen on the front of the bracket. The sync capacitor is on top of the pc board. Two screw clamp terminals are soldered to the pc board and one to the bracket to allow removal of the wiring.

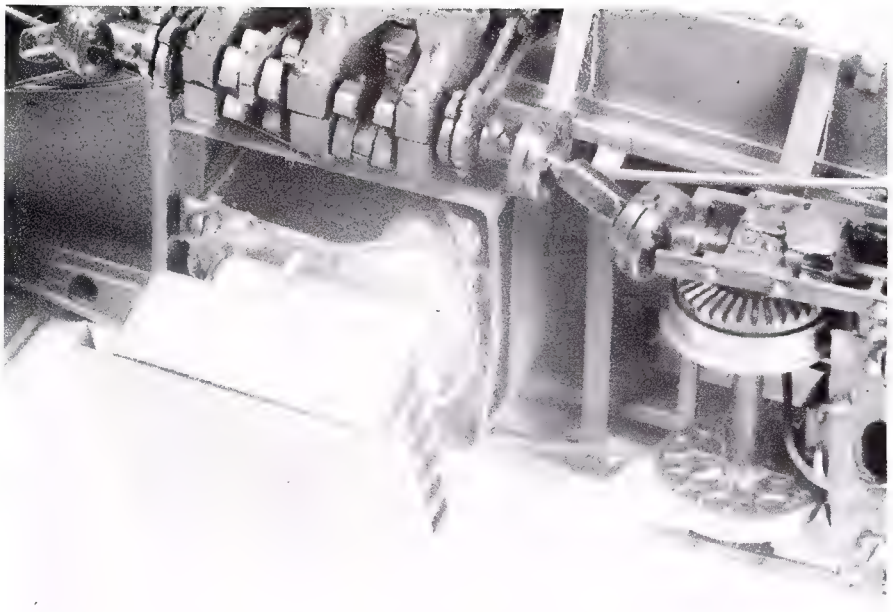


Photo 11. The pc board, containing the components and wiring terminals, is above the PFM-11 speaker on this On30 Shay. The speaker is epoxied to the firebox bottom and the board is attached by epoxying the axial-leaded capacitors to the speaker. The assembly simply snaps into the firebox.

Conclusion

I hope that this article will give you a better understanding of the use of the various components, and has inspired you to tackle some of the difficult installations. While this series was primarily directed to those experienced in sound systems and with some competence in electronics, I hope that others may be intrigued enough to look into sound. There are a relatively small number of sound systems in use today, which means that a lot of you are missing an opportunity to increase your enjoyment of the hobby. I recognize that sound may not be for all, but if you enjoy prototypical operation, it can bring new life and realism to your railroad. It has done wonders for me, and it can for you too.

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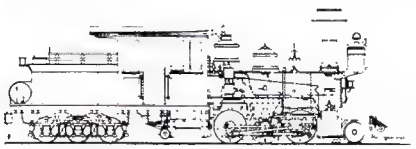

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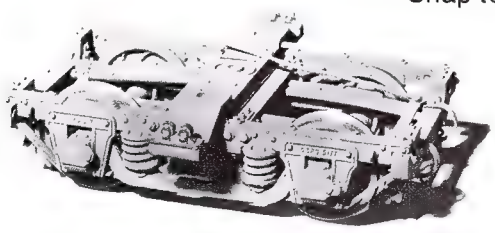

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Whiting Logging Railroad

by Dirk A...
photos by the author

After our wonderful day on the East Tennessee & Western North Carolina R.R. (**GAZETTE,** Jan/Feb, 1978), Will Rice and I headed for Asheville again by way of of Linville and the D. & H. McRae lumber mill and log railroad. As the old Chrysler roadster bumped over the ET&WNC crossing and into the mill yard, we spotted engine smoke! It was a little bootboilered Shay, being fired up on slabs by a small boy. The boy offered that she was going to be used move some lumber into the kiln. But this was about the extent of activity on the McRae system. The main line into the woods was gone; only the wye-shaped trackage around the mill remained. Small lots of lumber were still being trucked in. A small Climax with a wrecked pilot and a very trim three-cylinder 25 ton Shay were on hand, but there were only a few flat cars about.

"Whiting came and took all our log cars over to Butler," volunteered a mill worker. "They're the last logging railroad around, and they're about done."

So just as soon as we could, we headed over the mountains to Butler. It was a long ride in the old car, which couldn't do much better than 30 knots on the level. When tired of the seats, we would pace on the running boards. In fact it was entirely possible to walk right around the old crate, up one board and over the heavy fender, across the broad bumper, and down the other side and back to the right hand side. Butler is up a valley running north of the North Carolina border in Tennessee. It was a remote area and there was little along the way but the narrow road and a light freight-only branch of the Southern. Finally we arrived at Butler, a wooden town surrounding the Whiting mill.

Down at the mill we found a 50 ton Climax with a great balloon stack sitting cold. Her tank deck was being replanked. The track ran along towards the pond and at the little brook formed by its outlet, the rails simply ran right through on the ground under a bit of water. A shed contained a small Climax and just beyond were the remains of a large Shay. She was battered beyond ready repair. We were told she had rolled over into the Watauga River last week. A string of bunk cars stood further along. Then the line made a sharp turn directly at the slope of the hill behind the mill, crossed the Watauga River on a heavy log bridge, and ran straight up the slope like a cog railroad – without the cogs!

Back at the mill a fellow with a heavily bandaged right hand told us that he had been running the Climax and had been oiling around when she had moved on him and taken some fingers.

We were admiring an eight-hole privy set like a bridge over a gulley with the mill pond stream below, when a man advised

us that Mr. Whiting was in his office. I went in to ask permission to ride the road up to the camp. Mr. Whiting was a strong old man and fixed me with a hard look.

"My train is dangerous!" he declared.

I replied that I understood that, but would like to get pictures of the last such railroad in the area. I told him that I was an artist and photographer.

"Do you know who L. L. Fellows is?" he asked. I certainly did; Fellows was well known in fashion art at the time ... and proved to be a son-in-law of Mr. Whiting! So I was on, and would be advised by mail when the log road would be operating a round trip run in one day.

****

When I got the letter, I made the trip back by bus; indeed the bus up the lonely valley to Butler had the familiar initials ET&WNC on its sides. The driver dropped me on the dirt street late in the evening, and when I looked around, I saw no lights at all. Butler was sound asleep! A faint glow and hiss of water told me where the mill was and I walked down there. The big Climax was under steam at the coal dock behind the mill, and coupled to it was the road's caboose, sort of. It was a flat car with a board-and-batten shack on one end. The rest of the car had stake sides for taking coal to the camp. Logs were loaded on the car for the ride back. A man appeared with a bandage around his head; he was the night watchman. He suggested that I spend the night in the caboose. I entered the shack and lay down on the rough splintery floor planks. I tried to sleep but it had gotten quite cold and damp. I was in a state of groggy misery when suddenly the rough planks were yanked out from under me! The watchman was moving the "caboose" nearer the coal dock. A geared engine moves abruptly!

After two or three more floor snatches it got quiet again and I was returning to an uncomfortable stupor when the floor gave me a blow on the jaw. The watchman was tossing large chunks of coal onto the other end of the car. I got up and helped him. At this time, still pitch dark, lights were beginning to appear in windows here and there. The watchman told me where I could get breakfast and I went off and had a good country meal.

I was strolling back to the mill when I heard the rapid tattoo of steam locomotive exhaust. Cripes! I had come all this way to ride that train and it was leaving without me! I dashed to the mill yard and there was the big Climax rumbling slowly along the track, for all that she sounded like the 999 at speed on Batavia Flats. It was getting light and the log railroad was in operation. I climbed aboard.

The engineer was an elderly fellow in an old felt hat. The fireman was in a somewhat newer felt with the brim snapped down forward. The firedoor had a simple latch fixed to a chain hanging from the cab roof; a yank on the chain opened the door. (An overturn of the engine would also open it.) Two brakemen were following the engine, carrying peavey hooks. One was a slim fellow with his cap brim pulled down on his nose; the other was a hefty and jaunty type with his cap brim stuck straight up. They were Bill and Al, and the engineer was known as Buckeye.

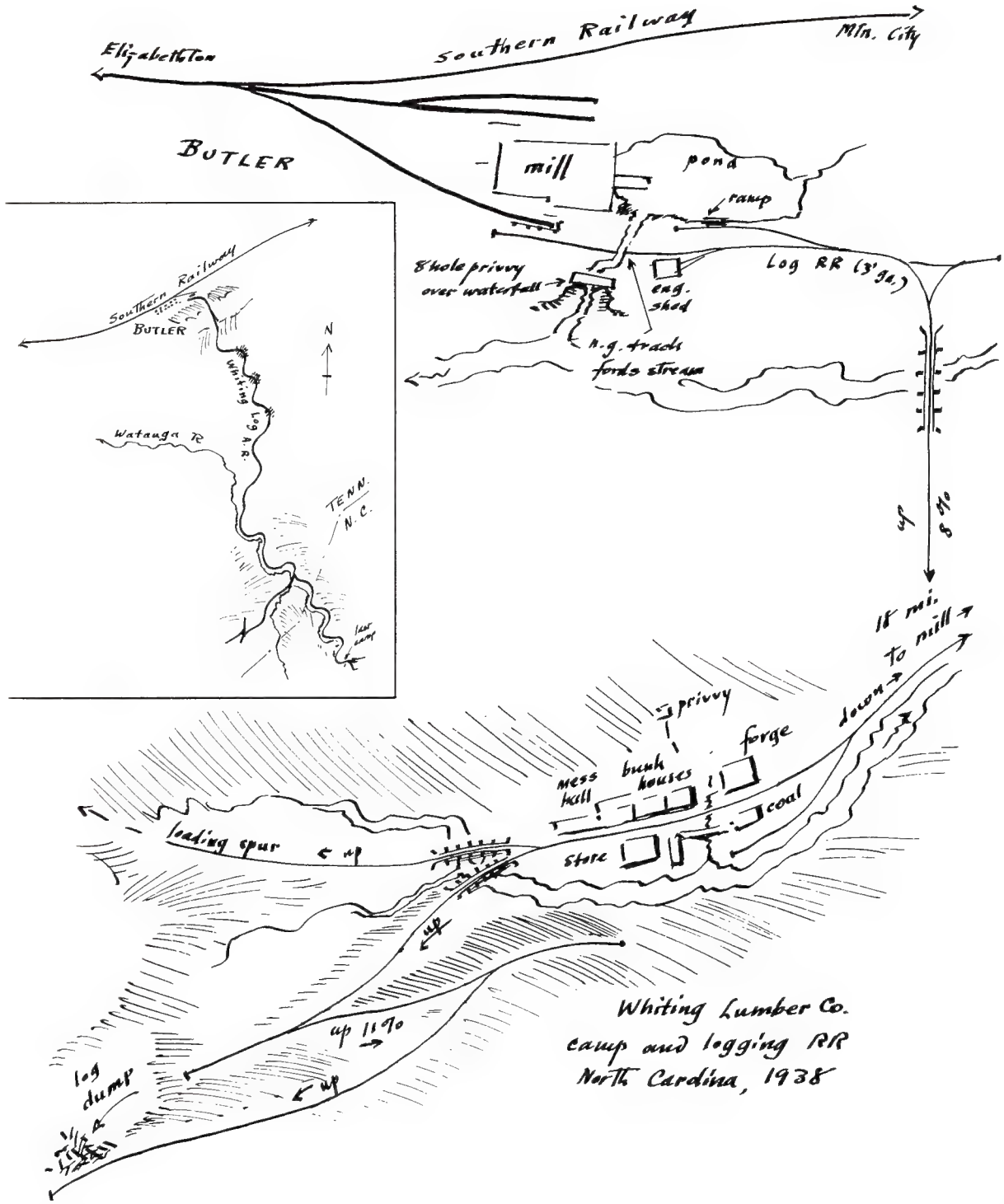
There were eight bunk cars loaded with massive logs to be dumped in the mill pond; then we would take off for the camp, eighteen miles up in the mountains and across the North Carolina Border. Each load of logs had a chain around it with two or three heavy logs laid loose on top.

Coupled to this string, the Climax ran onto the unloading spur at the edge of the pond. There was no device to aid the unloading except for a rough platform next to the water and a sharply tilted bit of track. When the engine hit that section I thought she was going right on over, but she straightened up again. The first load was spotted. For some reason, the release catch on the chain was towards the pond. Al grabbed his peavey by the very end of the handle and gave it a whack. The logs slowly and heavily boomed across the platform and splashed mightily into the pond. Somehow Al was out of the way.

The next load was the same, except that when the chain had dropped clear, the logs didn't move. So Al and Bill stepped onto the platform and set their peavies into either end of the near bottom log, and crouched like wrestlers approaching a tiger, gently put their weight on the handles. They were right in the path of the logs – yet were clear when the logs came rumbling off the car. Finally all eight loads were in the pond and we were ready for the run to camp.

We simply took off backwards, for there was no room to turn a train up there. It was starting to rain and as we got up on the 8 percent slope behind the mill, the Climax started to slip. Al reached into a steel tub of sand on her rear end beam and sanded the rails by hand. Soon we were on the top of the hill and looking beyond

◄ A head-on view of the Whiting Climax blowing off steam while the brakeman carries a rerailing frog back to a car which is off the iron.



down into another valley. The grade down was just as stiff as the grade up but we cranked along the slopes and across some ravines on three tall curved trestles. The trestles were not exactly new; in fact they looked greyish-green.

At the foot of this grade the line rejoined the Watauga River and we climbed rather steadily. Suddenly we stopped. The reason was that we were simply out of steam. The Climax sat with the blower roaring, building up another head, and then we were off again, still with the eight bunk cars being pushed ahead, and then the flat shared by a load of coals and the "caboose", and the engine last, backing up.

There were two more stops to blow up steam and another pause for a bunk car rerailment. Our general direction was into the steep mountain country at the headwaters of the Watauga River, across the border into North Carolina and not too far from Boone, North Carolina, terminus of the East Tennessee & Western North Carolina–Linville River system. We were thus not very far from the first area logged by Mr. Whiting around Shulls Mills. This area had fed into the ET&WNC via Linville Gap. The Linville River RR, an extension of the ET&WNC in fact, had been a reworking of the log RR outlet. But for this final phase of logging it had been more convenient to bring a mill around and set up at Butler, Tennessee, on the freight-only Southern Ry. branch to Mountain City, and build a narrow gauge log track in from that side.

Suddenly there were weatherbeaten board-and-batten buildings on either side of the track. We were at the camp. Buckeye brought the Climax to a stop just onto a trestle across the creek above the camp, and got down and chained one of the drivers to the rail, tie and stringer underneath it. We were just in time for lunch. We all went into one of the buildings where we joined the loggers and other workers and were served an excellent meal at tables.

Just beyond the camp the creek divided.

There was a loading branch up each branch of the creek, and thus two trestles in the narrow space. Four of the eight empty bunk cars were set off on a spur siding just below the camp and we started up the left-hand fork for logs. As I rode into the narrow ravine, I noticed that its floor was rapidly becoming steeper. We started up a switch-back so steep as to seem to stand on end! I was told that the grade was 11 percent. At the top end of this leg one could look right down on the roofs of the camp. We pushed the three empty bunk cars and the caboose-flat onto the next leg, and then Buckeye dropped the Climax back onto the middle leg from where the coal was easily heaved over onto the tank of the engine. Then we put the train together and continued to back up this leg until the floor of the ravine ended. There sat a steam loader beside a great pile of large logs that had been dumped down from the mountain side above us.

I was wondering how we were going to load the cars with the loader itself on the same track as our train, and no siding (nor room for one). The answer was simplicity itself. The loader's tongs were hooked to the center sill of the first bunk car and it was simply lifted off of the track and dropped down onto the ground at the side. The next car was lifted the same way and casually set down on top of the first one. And thus with the third as well. The loader could now put logs onto the other end of our caboose-flat.

Now either Bill or Al would take the tongs of the loader on a careful essay out over the tumbled log dump and set them on the center of a log. The loader would then start to tug it free; the pile would often shift with heavy boomings. As they were lifted into the air logs spun to and fro on the cable. But the loader operator nicely set them with crash right into position. Bill and Al took turns at this game; it was clearly dangerous.

When a car was loaded, the chain was passed around, and then two or more logs were set loose on top "to keep the chain tight". The caboose-flat was loaded first after its hand brake had been set tight. Buckeye now eased the car down the grade a bit, and the loader now picked up the bunk car on the top of its pile. This was set down once or twice on the track before all eight wheels were on. Then its rachet hand brake was cranked up tight and it was loaded. Thus when all four cars were loaded, the brakes were already set up tight. We had no air but the Climax had steam jamb brakes on its drivers. These had a jerky application (quite as an auto driver might dab at a foot brake pedal to keep from locking the wheels and skidding). So we eased down the spur to the switchback tail high above the camp roofs. The switch was thrown and we started to back down the 11 percent leg.

From my vantage point in the caboose I was sketching some details of what I had just seen. Suddenly, one of the men muttered something about taking another hitch on the caboose hand brake and threw his beef on it. The rod broke and we pitched down the 11 percent grade with a roar. Buckeye had her in reverse and the big gears rumbled. There wasn't time to jump. We were scared stiff. I was drawing; I just kept drawing. This later proved to have earned me a reputation for coolness I didn't deserve.

Buckeye got it all stopped before we went off the tail of the leg, and we eased down into the camp where all was secured while the broken rod was removed and taken to the camp forge.

With no further incident the other four bunk cars were loaded and brought down, and the train was then put together – seven loaded bunk cars and the caboose flat with its load. Bill made a link and pin coupling between two bunk cars. To make a link and pin coupling, the brakeman guides the link into the other open drawhead while holding the pin cocked over it, then drops the pin in, and gets out of there with a whirl as the cars continue to move together. Another pretty and dangerous move. Sticking a bull in the bull ring by leaning in over his horns is not as pretty and hardly more dangerous.

With all brakes set we started down the mountain, Buckeye eying his train and now and then working a bit of reverse steam. To do this, the engineer kicks open the cylinder cocks so that no condensate can kick out a cylinder head. It makes a sound like a whirligig and fills the air with condensed steam.

At a woods siding we picked up seven more loads and continued on down, finally arriving at the foot of the grade that climbed up the back of the ridge behind the mill. A couple of loggers from the camp headed for Butler now got off and went on to the village on foot, departing with a few jibes about our predicament. I soon learned what that was. It was raining again, and we had to double the hill of 7½ precent grade. So we cut out the last eight cars.

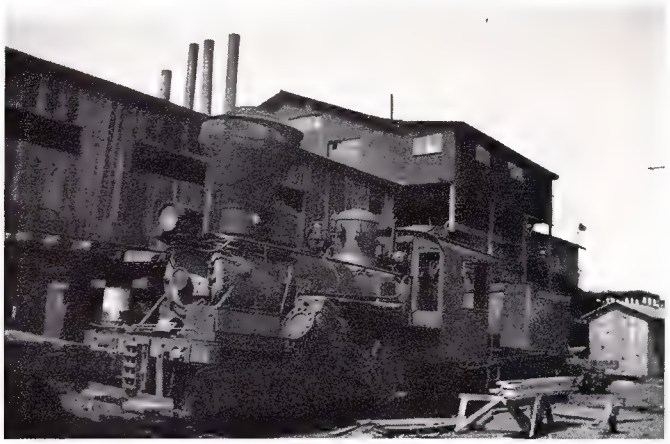
Since the link-pin couplings would be heavily loaded, we ran some risk of a break-in-two on the grade. So a "jill pock" was fitted to the rear of the last car. A "jill pock" is a timber dragged along behind a car, its front end held by chain against an end sill. It was to catch against a tie and stop any runaway if a coupling broke. In position it bumped and themped over the ties. We started up the grade at half snail speed, and any bit of extra speed we built up was often lost as the Climax slipped down on the wet rail.

Soon we were out onto the first of the three high curved timber trestles. It was fifty feet down, and there was no way off in a hurry from our spot between the engine and the logs. Later as we went out onto the next trestle the Climax slowed down and slipped some more. The trestle was beginning to rock... The men in the "caboose"

The Whiting "Parlour Car" complete with knotty pine paneling. It is standing on the mill pond spur with a log train ready for unloading.

The camp seen from the tail of the switchback on the loading spur. The "Caboose" stands in front of the camp forge while a brake rod is fixed.

The "Main Street" at Whiting's last log camp. This view is looking downgrade with the mess hall on the left and the store on the right. The track divides and goes onto loading points further along the line.



The Whiting 50 ton Climax standing by the mill on an off day. The tank deck is being replanked.

sat sullenly. Then Al muttered, "That old man don't care!"

We passed over the third and last trestle and finally got to the top of the ridge. The first eight cars were stuck onto a siding. Al was cheerful again and invited me to ride the pilot of the Climax back for the other half of the string. I volunteered to stay with the cut in the siding.

After the better part of an hour, the Climax was in sight with the rest of the train, the "jill pock" on the end wagging like some sort of tail. Slowly it reached the ridge top. Now the train was reassembled and we returned via the steep drop straight down into Butler. Again all the hand brakes were set up good and tight – so hard that Buckeye had to work steam fiercely to get the cars to the head of the grade. Over it we pitched down the track, and he had her in reverse all the way down and hitting the jambs. We all stood – I'm not sure whether with impatience or fear. Perhaps both!

At the mill, the Climax and "caboose" ran to the dumping spur. The "caboose" logs had to be dumped so that the space could be loaded with coal again for the next trip. With this done, Buckeye ran the Climax around to the coal dock with the car.

Bill and Al and I walked into town in the gathering dark.

Al said, "Hit don't seem three dollars is much for a day like that!"

For my part, I had wondered for some time what a logging railroad was like. Now I knew.

On the way!

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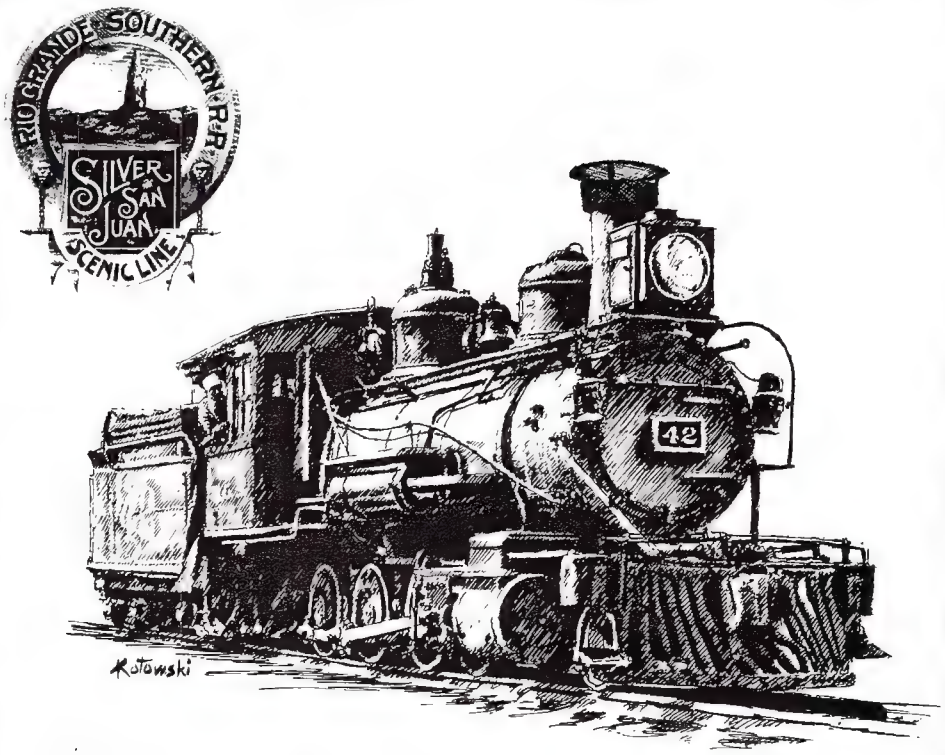
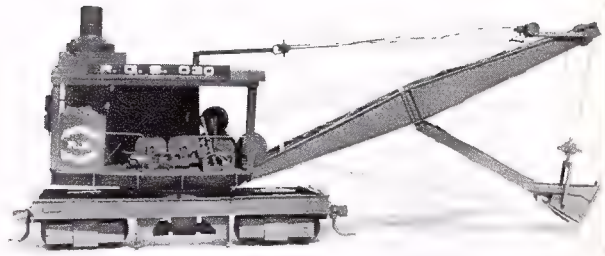


The Rio Grande Southern C-17 Number 42 will be arriving shortly. This meticulously detailed narrow gauge 2-8-0 will be our best offering so far. This Key model will feature a coreless motor for power and full cab detailing.



Rio Grande Southern Ditcher 030 in HOn3

by Justin Crom
photos by the author

The July 1975 issue of the **GAZETTE** (now out of print) contained two interesting articles about ditchers: R. E. Sloan's very complete treatment of the various prototype ditchers and E. A. Bracher's outline of the techniques he used in constructing two fine models of the D&RG's OW and OX. I was intrigued by the idea of building a model ditcher, but at that time no kits were available and at first I was afraid to attempt scratchbuilding.

One night, after reviewing Al Armitage's treatise on styrene fabrication (*Styrene Fabrication,* Kemtron Corp.), I decided to bite the bullet and give scratchbuilding a try. For starters, I decided to try the boom of the Rio Grande Southern ditcher as drawn by Sloan on page 23 of the July 1975 **GAZETTE.** After all, if the boom was a failure I could always destroy the evidence and no one would be the wiser. To my amazement the construction proceeded quickly and the completed boom didn't look bad at all! Next came the main frame, soon to be followed by the bucket and lower boom. Trucks were fabricated by modifying R. Robb trucks. Kadee couplers were screwed into place. The differentials and winch proved to be the most difficult part of the project, but with the aid of the AH&D photos and drawings in Sloan's article, I wound up with a credible representation. I was fascinated as the pieces were fitted together and the ditcher began to take shape. A coat of Floquil's Grimy Black and lettering from Sloan's excellent decals completed the model. At last I knew the satisfaction and pride of scratchbuilding. I've enjoyed displaying this model to friends. I even became so bold as to enter the ditcher in a Fox Valley Division NMRA contest where it garnered a first prize.

The construction techniques I employed are fairly standard. Styrene was used for the bulk of the model except that plexiglass was used for the boiler and aluminum rod was used for the differentials and winch. Both the boiler and winch drums were turned to size on a Unimat. Nylon thread was used to represent the cable. I coated the thread with Hot Stuff ACC to make it rigid. Unfortunately the thread has picked up a bit of moisture and has acquired a few nonprototypical kinks and bends which show up in the photo. Ric Pofahl of Toy and Hobby House in Des Plaines, Illinois, has suggested that a coat of beeswax applied to the thread will prevent the kinking. I'd appreciate hearing any other suggestions.

The many small strips of styrene that were required for the boom bracing were cut from .010 sheet stock with a bow compass fitted with a dividing point and set to the desired width. The shoulder of the compass' pivot was used to guide the dividing point parallel to a finished edge to produce the strip. If I were to build another ditcher, I would make use of Evergreen Scale Models styrene strips to save time. Rivets were embossed by walking a pair of dividers along the desired line. I found the rivets produced in this manner to be pleasing to the naked eye, but I have been consistently unsuccessful in photographing the model so that the rivets show up clearly.

I thank Messrs. Sloan and Bracher for their inspirational articles and look forward to their future contributions. I encourage any **GAZETTE** reader who has previously shied away from scratchbuilding to go ahead and take the plunge. I can assure you that you'll be rewarded with immense satisfaction and will not regret adding this new dimension to your hobby experience.

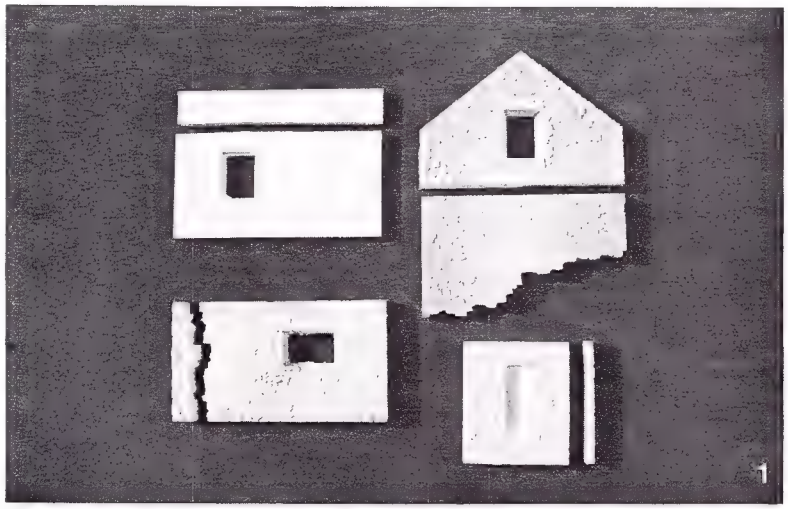
Coloring Plaster Buildings

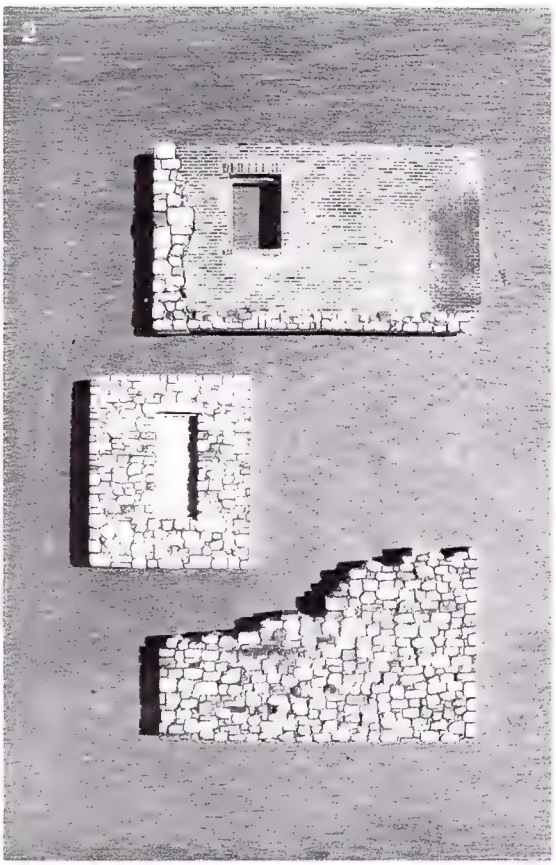
by Thomas A. Yorke
Photos by the author

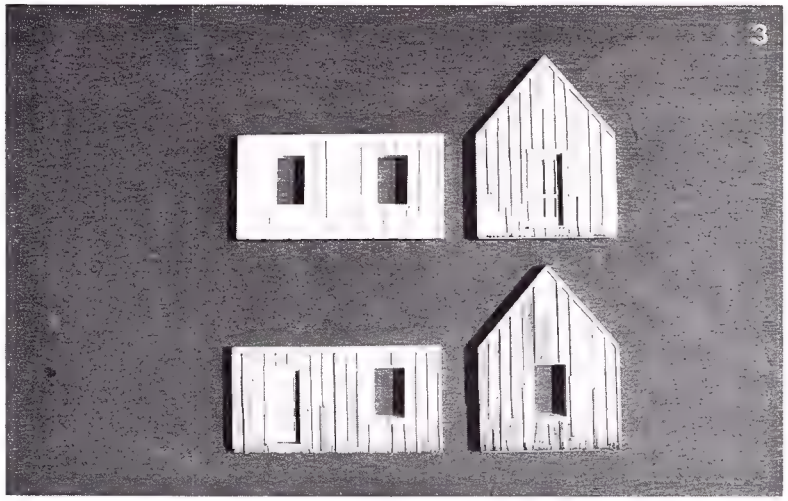
INTRODUCTION

Nearly every model railroader has a favorite building material. Wood, styrene, card, and brass are the most common favorites. Wood looks like wood, and in general all these materials represent themselves very well. It is not so easy to make one of these materials represent another; for example, to try to make card look like brass is extremely difficult and often disappointing. There is one material that is ideal for representing others, plaster. Plaster is one of my favorite modeling materials and can easily be made to represent brick, concrete, and stone, as well as metal and wood. Plaster of course can't be used for everything but it has a much greater potential role than just building scenic rocks and mountains in the background.

A pure white plaster carving or casting seems far from the realism of brick or stone. In fact, the virtues of the white powdered stuff are only apparent when it's finished properly. Many people I know recognize the potential of cast plaster structures but just can't (or won't) paint them. "How do you make that stuff look like stones or bricks?" they say. This stumps me because it's so easy I can't imagine not being able to do it. That's right, it's easy. It does take a little practice but then just about anything "artistic" takes practice. In this article I'll show you how I paint plaster; I hope I'll encourage you to give it a try and find out how easy and enjoyable it can be.







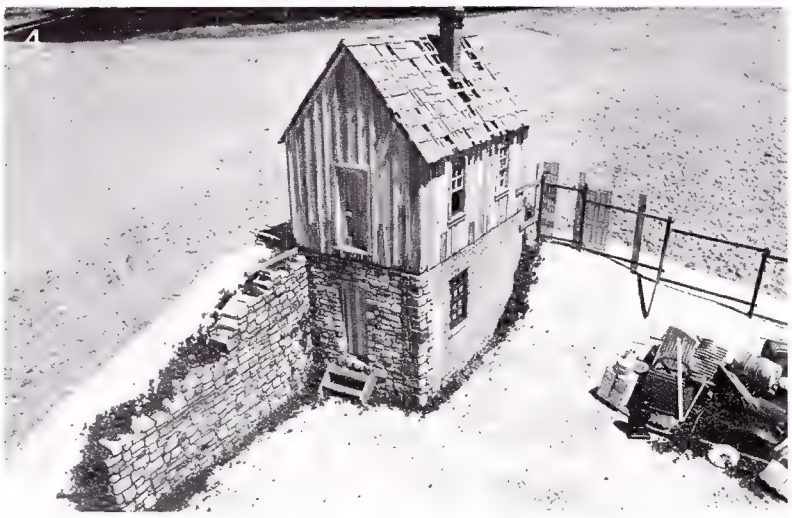


Photo 1. The raw uncolored plaster castings showing the basic masonry units for the building.

Photo 2. Some of the basic units shown in Photo 1 are fitted together after some filing and sanding. The wall at the top is in the process of having mortar applied to its bricks. The part on the right is not finished.

Photo 3. The standard cabin unit before assembly showing the progression of the weathering as darker and darker stains are used.

Photo 4. The completed structure in place. Note the combination of brick, stone and wood.

MATERIALS

I use Krylon Crystal Clear spray to seal castings after they have been filed of flash. Several liberal coats are required. Be especially careful to coat corners and door and window openings or recesses. I spray the casting's backs too.

The four brushes I find most useful are #0, 4 and 6 pointed red sable and a ¼ inch flat bristle brush. The red sables are watercolor brushes. Let me stress the use of red sable. Do not substitute camel's hair. The extra expense for fine quality brushes is well worth it. They will last for years if cleaned immediately in solvent or water followed by, in either case, a soap and water rinse. The bristle brush is for oil painting. I use this brush for applying the "mortar" in brick walls. A few rags are always handy to have around too.

You will also need paint and thinner. Floquil colors are my favorites. I use artist's gesso for mortar. Poly-S will work fine as a substitute for gesso.

THE STRUCTURE & ITS FINISHES

First you need to choose your structure and get castings or carvings in plaster of its various parts. The structure I have chosen to illustrate this article is pictured on the cover and in the Photos. Photo 1 shows the basic building units for the masonry part of the structure. These were cut from cast walls of the types desired. Photo 2 shows some of these basic building units fitted together after some filing and sanding. Photo 3 shows a standard cast cabin kit in ¼ inch scale. This unit fits on top of the stone and brick first floor. We'll refer back to these photos later.

How do you color plaster to make it look like real brick, or stone, or wood? First you need a pretty good idea of what real weathered brick stone and wood look like. Color photos make good references. Take your camera on an expedition and shoot various wall types and finishes. Visit a local book, card, or poster shop. Greeting cards, posters, and many books have color photos of weathered barns and old brick and stone structures. The cover photo shows brick, stone, and wood all done in plaster. Now let's see how to make it happen.

BRICK

Brick is really the easiest of the three. Remember to seal the castings first. I'm really going to harp on sealing because nothing else will come out right if you don't seal first. For brick, the base color I use is Box Car Red. I keep a "base" bottle of this around. I perpetuate its existence every time I paint a brick structure by adding one or more of the following colors: Rust, Tuscan Red, Reefer Gray, Mud, or Roof Brown. Hence, no two structures are the same color. Be sparing with your brick color as you apply it to all surfaces that are to represent brick. Use a brush and don't worry about covering too evenly. Allow this to dry overnight. Having waited with bated breath, we now proceed with the fun part. Take the bristle brush and dip it into gesso or Poly-S and apply to a small area on the wall. Brush right over the brick getting the paint into the mortar cracks. Follow this very quickly by wiping over the surface with a rag. Again don't worry about being too neat or even. Repeat these steps in small areas until the wall is finished. Photo 2 shows the brick wall during painting. The right side has not yet been finished with "mortar".

The last step is to paint a random selection of individual bricks with straight brick colors, modified slightly with the colors previously mentioned. That's all there is to it.

STONE

At the risk of oversimplifying, I'll divide this material into two categories: cool and warm. Cool stone is on the gray, blue or green side and warm is reddish or brown. Both are handled in the same manner but the stains used differ. For warm stone, Floquil Driftwood, Walnut, Mahogany and Teak are used. You'll have to make your own stains if you're doing a cool wall. Since they are both similar in process, I'll use the colors for a warm wall in the description.

New bottles of stain should be used for the colors needed most – Driftwood and Walnut. The other stains are used as random tints and are thus used sparingly.

After sealing, apply an overall coat of Driftwood. This is the important part – barely shake the bottle for this first application. All you want is a bare hint of stain so if you've shaken the bottle too much, let it sit awhile and settle before use. A point to remember is that you can darken the stones with each successive application but if you make it too dark too quickly, you can't lighten it! Let me stress again the importance of the Krylon Crystal Clear sealer coats.

Photo 2 shows completed stone walls. Notice how some stones stand out because they are darker or a different color stain. Notice also the cracks in the stonework. How to make the darker stones and cracks? Keep reading.

Shake the Driftwood bottle a little more than the first time. It should still be very thin. Start staining small random areas of stone – several stones at a time. Do this to all of the walls in your project. Go back when you've finished this and stain a few stones a little darker Driftwood. This takes time, but work showly.

Now we're ready for the bottle of Walnut. Shake very little as you did with the Driftwood. Stain areas with this thin mix. Leave some stones, maybe 25%, Driftwood. Go back and randomly stain stone by stone with Walnut. Now go back over the entire wall with a thin stone by stone application of Mahogany and then Teak. Don't stain more than 10% of the areas with these colors. Just a touch.

Now use your big pointed sable brush and load it with full strength Walnut and lightly touch the cracks in the stonework. Capillary action does your work for you here. Do this until you are satisfied with the effect. Work very lightly – no heavy hands! That's that!

WOOD

Use some reference photos here and decide whether you want a sun-bleached effect or a very dark and rotten one. The technique is the same except the first is lighter and uses mostly Driftwood. See Photo 3 and the overall photos. Again, remember to seal the castings!

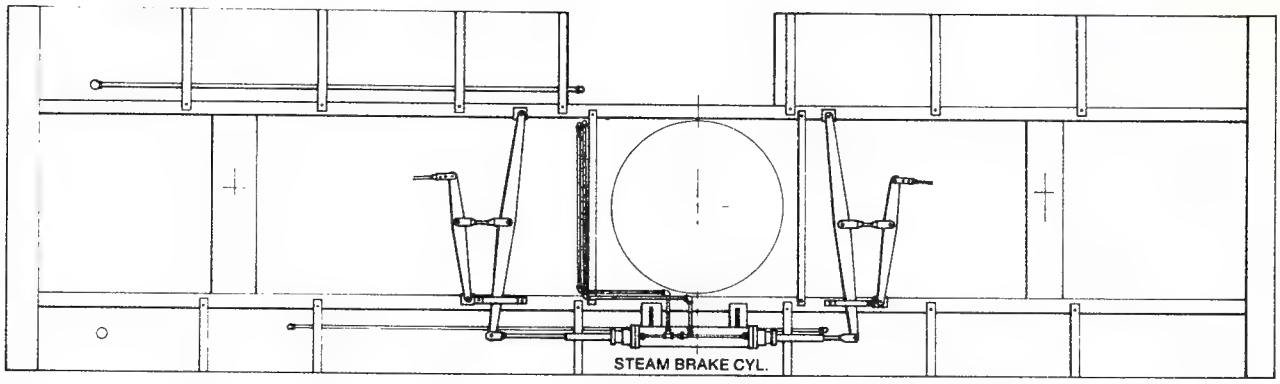
Use Walnut and Driftwood. Start with a new bottle of each and barely shake it. Apply one coat of Walnut overall and let dry. Follow this with successive coats of Walnut – each time making the solution a little less diluted by shaking more. Omit some boards, leaving them lighter, and go over others in a random pattern repeatedly for the darker tones for contrast. Let dry. Apply a thin coat of Driftwood (almost unshaken) over most of the "wood" parts. Build this up little by little as you did the Walnut until you like the effect. Try not to overwork any area. For the last touch, load a pointed brush with well-shaken Walnut and carefully touch the cracks at the bottom of the walls while holding the building upside down. The stain will run into and along the cracks and accentuate them nicely.

The best way to learn is to try. You've got to open those bottles of stain and don't be afraid! Work slowly and lightly, building color and tone as you go. Don't try and do it in one step. One last thought about time: the photo on page 13 of the March/April 1978 issue of the **GAZETTE** shows Rocopila Station. The five castings took over four hours to stain! It *does* take time, but it's worth it.

Photo 5. A weathered and open roof and a worn porch give a very delicate effect. The fragile stairway also adds to the detail.

Photo 6. Another view of the cabin portion of the building.

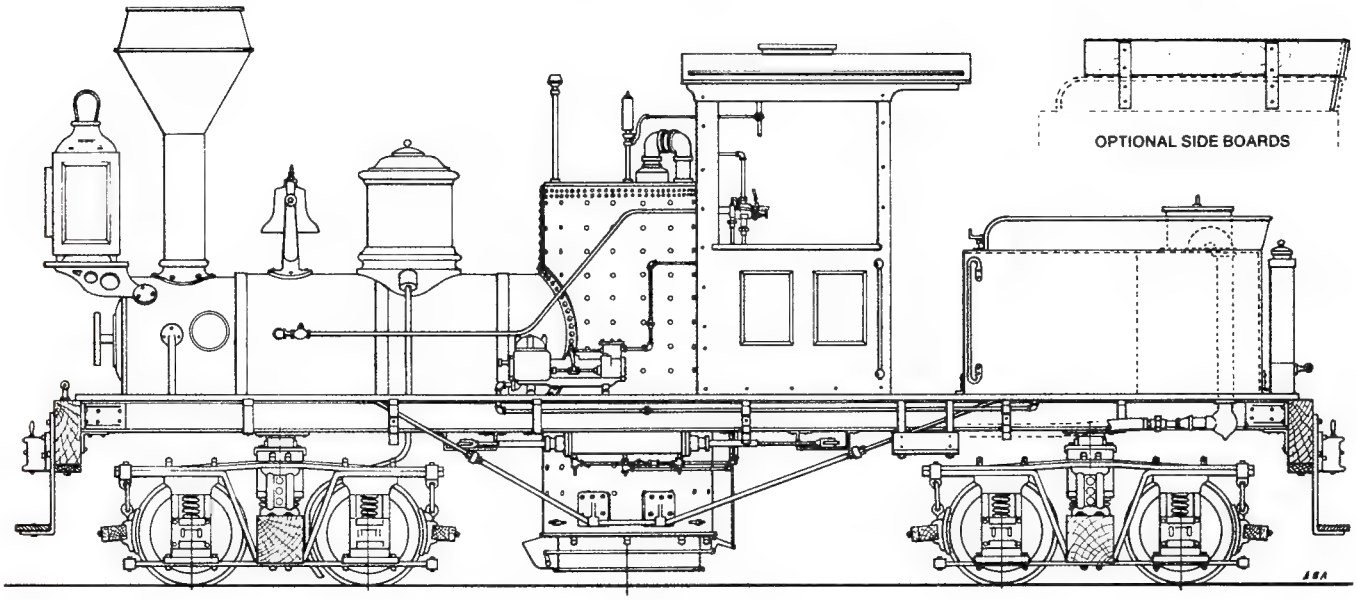
Photo 7. The "stuff" of realism. A pile of clutter can do a great deal to a model to make it seem real. Notice the Coke macine, oil drums and old car in the pile. All these details are available commercially.



ARRANGEMENT OF BRAKE GEAR (STEAM)

BOTTOM VIEW

FRONT OF LOCOMOTIVE →

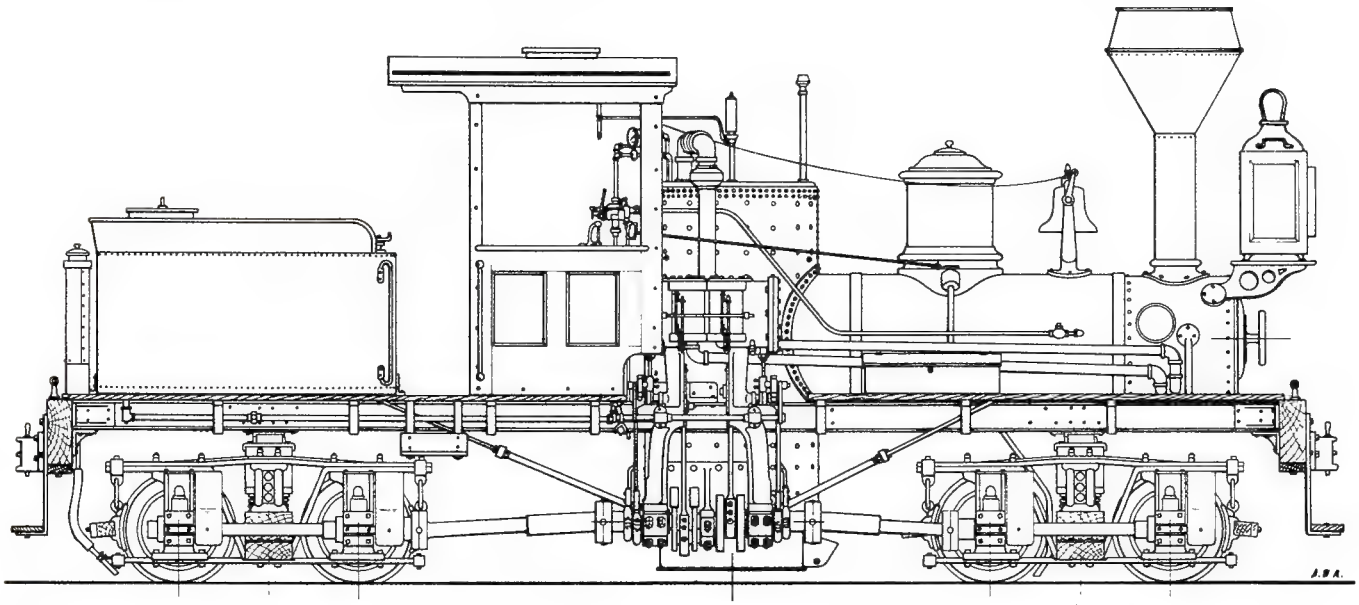


L.S. ELEVATION

13 Ton LIMA SHAY No. 122

As Originally Built for Rumsey Lumber Co.

Drawn by A.B. Armitage for Precision Scale Co. Scale: ¼" = 1'0"



R.S. ELEVATION

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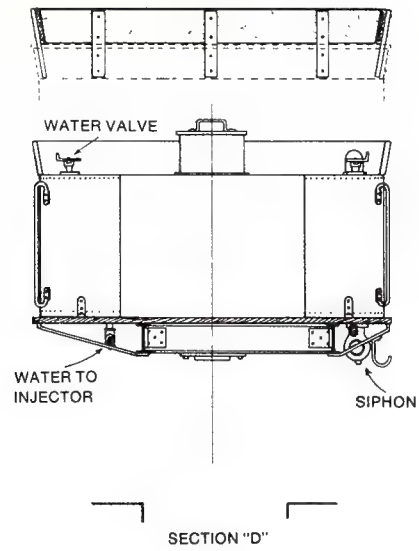
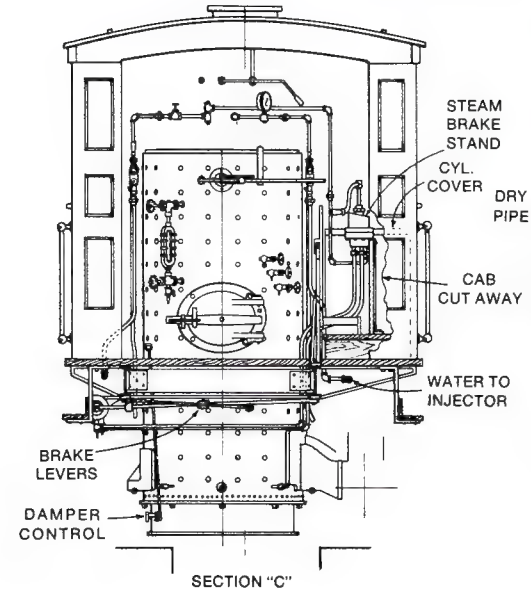
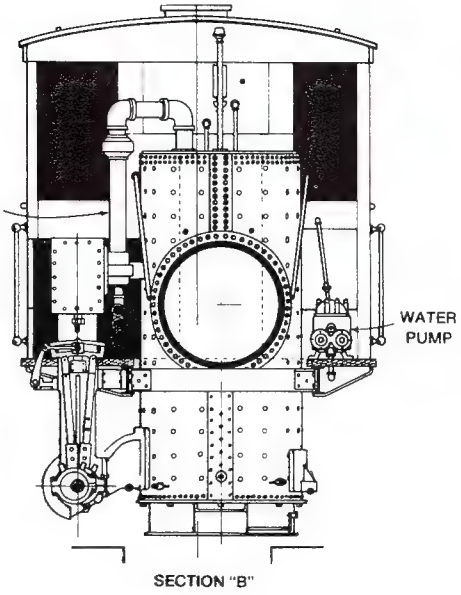
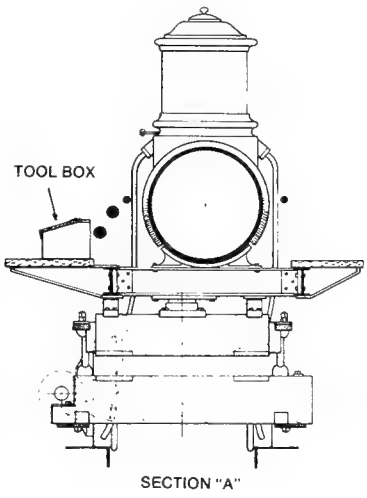
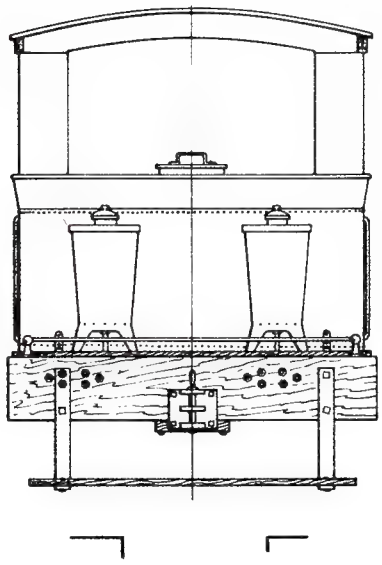


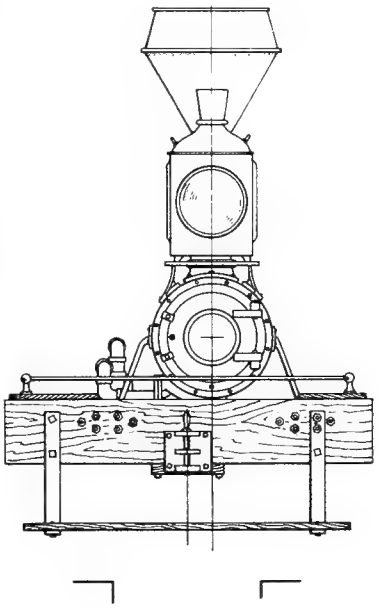








The drawing shows Shay #122 as originally built for the Rumsey Lumber Company. This drawing is the first of a series of three showing the evolution of this locomotive.



MICH-CAL #2 . . . the Oldest "Sidewinder"!

by Al Armitage

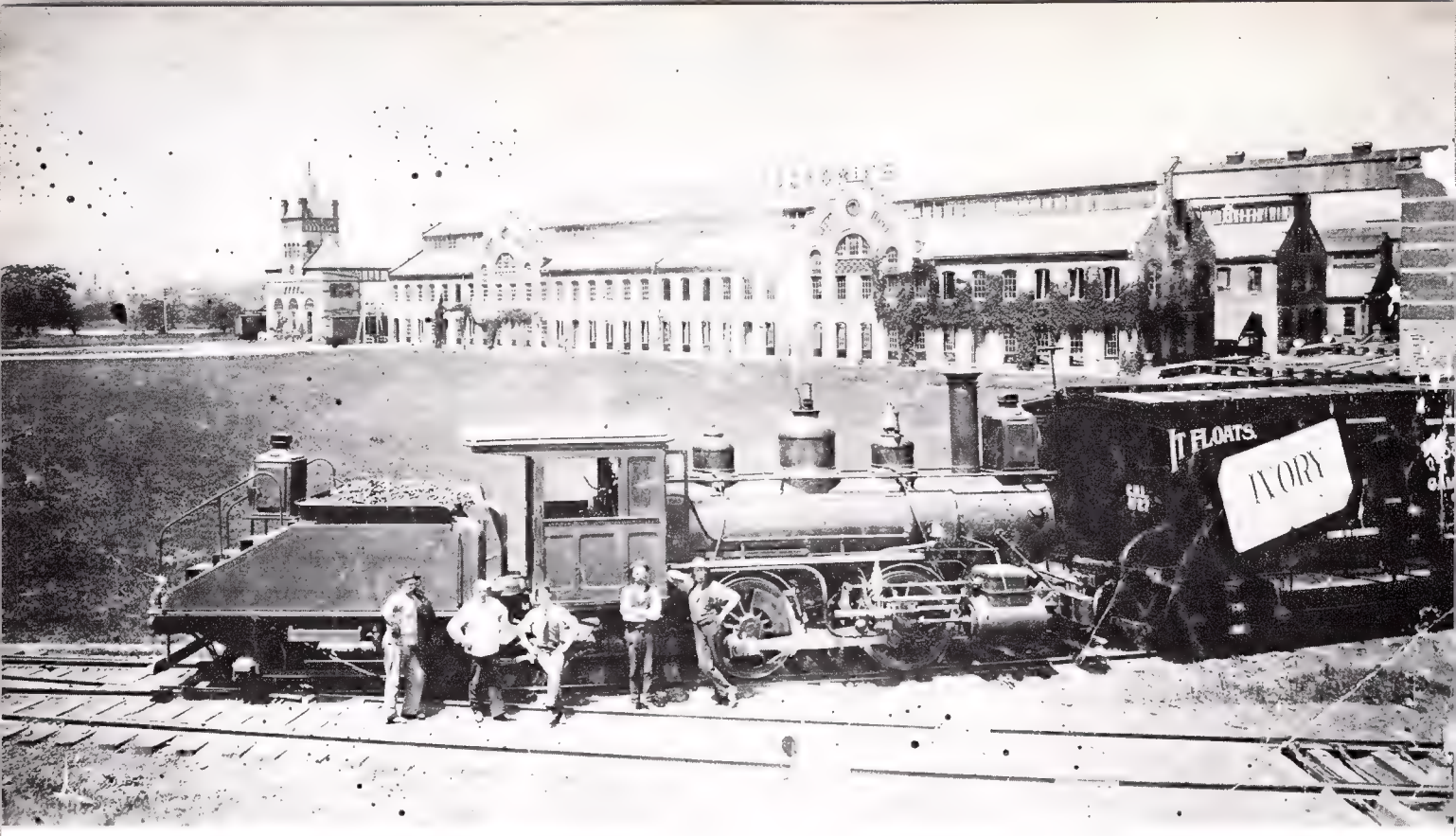
Carrying construction #122, this venerable Shay was built in 1884 by the Lima Machine Works, of Lima, Ohio, for the Rumsey Lumber Company, Big Rapids, Michigan. It was one of the first Shays to utilize the then new vertical firebox "Tee" boiler, also called a "Boot" boiler. As originally built, #122 was a wood burner with a small diamond stack, wood-panelled cab, and no front footboard!

In the 1890's, the engine was sold to the lumbering firm of Hart & Horning in Woodville, Michigan where she again served as a "woods" engine for several years. In 1901 the newly fomed El Dorado Lumber Company bought #122 and shipped her to Camino, California. Given the road #2, she was put into service hauling cars of lumber from South Cable (formerly Chute Camp) to Camino. This line had grades of 7 percent near Red Cut so a Climax locomotive was often used as a helper for #2 to get the heavy trains started up the grade. With the arrival of Shay #7, in 1904, the smaller #2 became the Camino switch engine where she served until 1951 when the rail line was scrapped.

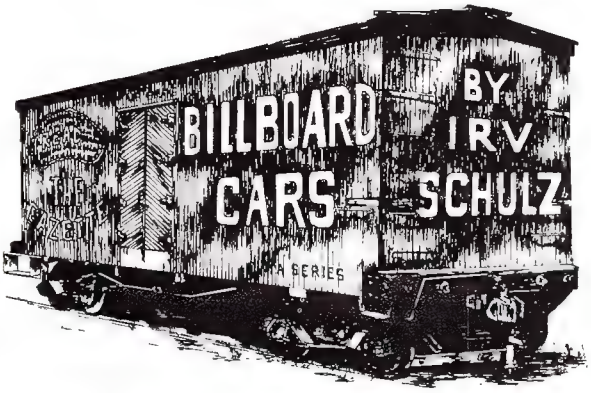
In 1911, the El Dorado Lumber Company was sold to the C.D. Danaher Lumber Company which eventually became the Michigan-California Lumber Company in 1918.

The Two-Spot was converted to burn oil about 1905 and was fitted with an ugly, oversize cab and home-made tanks. Badly damaged in the 1913 Camino engine house fire, she was rebuilt and ran until the late 1930's when a further rebuilding produced the present cab design of slightly more aesthetic lines. It was at this time that #2 had the "diamond" style Lima builder's plates added, one on the right side of the smoke box, the other on the left side of the cab. The Lima plate of 1884 was circular style although the only known photo of the engine during that period does not show any plate, at all!

Fortunately, when rail service ended, in 1951, #2 was preserved on display behind the Mich-Cal office in Camino. Thus, this rare one-of-a-kind Shay is still around as a reminder of the "glory" days of railroad logging. Considered to be the oldest Shay still in existence she is to lovers of the Shay an American Classic.



A fine vintage scene. Note the light rail and "new" look of this scene. This factory would make a fine backdrop for a model railroad. *Photo, collection of Irv Schulz.*



The Ivory Soap Cars

by Irv Schulz

The Proctor and Gamble Company of Cincinnati, Ohio owned an interesting and colorful railroad. This railroad served as a connection between the Proctor and Gamble plant in Cincinnati, Ohio and the Cincinnati, Hamilton & Dayton Railroad in Dayton, Ohio. The cars used on the Proctor and Gamble Company line were lettered for the Ivorydale & Mill Creek Valley Ry. Co.

The map shows the P&G plant complex in 1914. The rail used was only 60 lb. and was laid to standard gauge. The railroad was chartered in early 1890 and was dissolved sometime between 1912 and 1923.

One of the best known products of Proctor & Gamble is Ivory soap. This soap was not originally designed to float; this feature was an accident which was later capitalized on as an advertising slogan. Ivory was the first soap designed to be broken in half. The old time slogan was "Half for the bathroom, half for the kitchen".

One of the cars used on the I & MCV line was the unusual 50 foot wooden truss rod car shown in Photo 1. The I & MCV railroad owned approximately 37 of these boxcars. Whether they ever toured the countryside as part of mainline freight trains is hard to know, but they would be right at home on any short line railroad as most unusual and colorful vintage cars.

A model of the car in Photo 1 can easily be constructed from an HO scale LaBelle Racine Wagon & Carriage Co. car (kit HO#42). All that needs to be done is to cut the end blocks and siding down so that the height scales out at about 8 feet 7 inches over the eaves. The door, which is 7 feet 8 inches wide, can be made from excess material from the kit. Note that the door is left handed and that no brake equipment shows. I added the standard KC brake set as it came in the kit, and painted the car Pullman Green with a black underframe and fittings. Lettering for this car is available in HO only from the "125 Line" for $1.00 per set.

I would like to thank Thomas L. Underwood Jr. for supplying much of the information used in this article. If you do construct this car I hope that "It Floats" happily around your Hi-Iron.

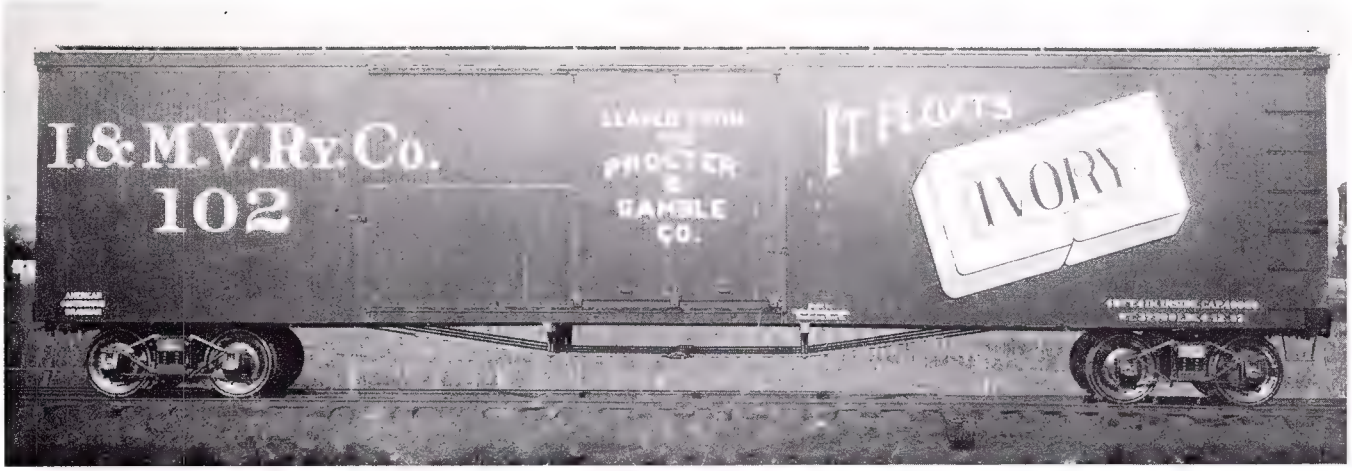
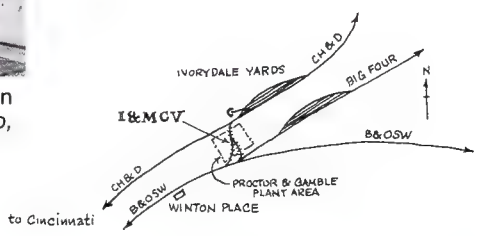


Photo 1. This car would be a fine addition to any vintage layout. The car is 7 feet 6 inches wide and is 50 feet long. The unusual lettering, the bar of soap, the truss rods and the arch bar trucks lend an air of distinction to this piece of rolling stock. *Photo, collection of Irv Schulz.*

Photo 2. A classic posed "shot" of the Proctor & Gamble locomotive. Note the moon and stars plate on the boiler front. What a collector's item that would be! *Photo, collection of Irv Schulz.*



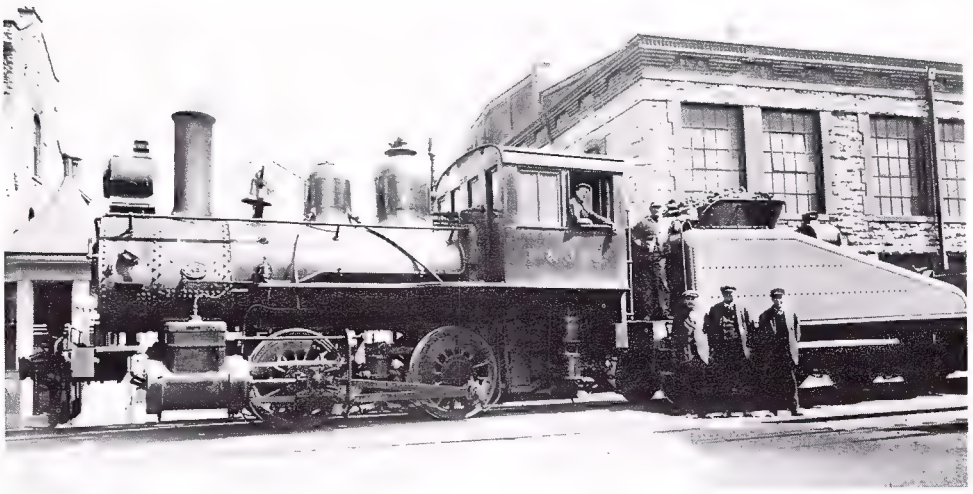
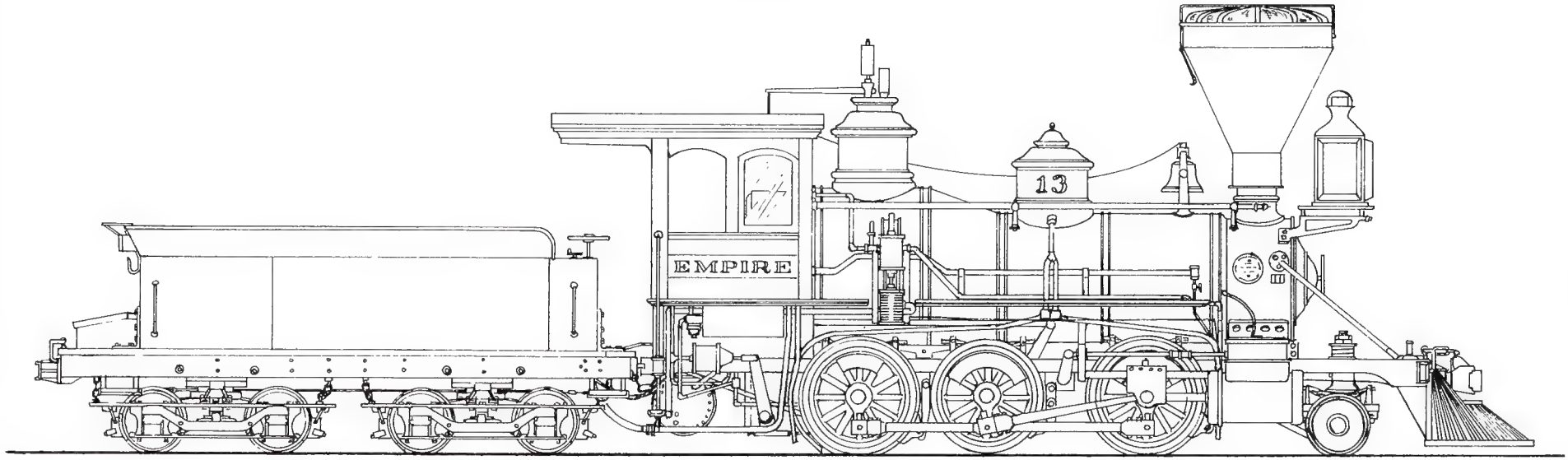


Photo 3. The Proctor & Gamble 0-4-0 at Ivorydale. The wheels and stack were painted red and the handrails were polished brass. She must have been a proud sight for her crew. *Photo, collection of Irv Schulz.*

VIRGINIA AND TRUCKEE RAILROAD

no. 13



EMPIRE

BUILT BY

BALDWIN LOCOMOTIVE WORKS

1873*

Measured and Drawn by Gary Caviglia -- July 1978.

*1966-78 VERSION

The EMPIRE

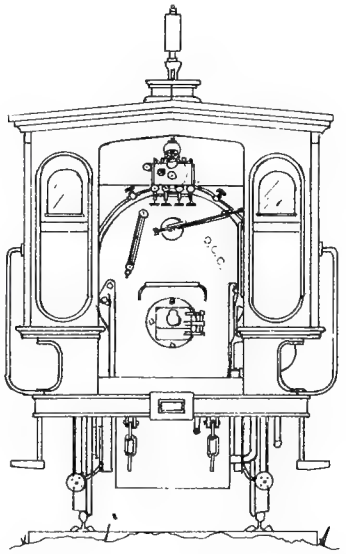
by Gary Caviglia

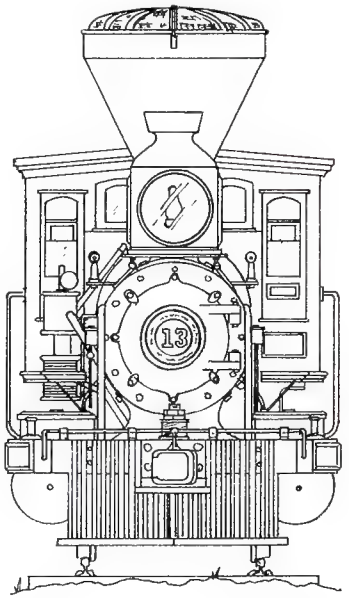
In January, 1873 the Virginia & Truckee Railroad received a new locomotive from the Baldwin Company. It was named the EMPIRE after a town located east of Carson City, Nevada. The locomotive was put to work hauling freight and ore trains in the Comstock.

As mine production slowed down the EMPIRE was used very little. In 1886 she was rented to the Central Pacific for several months. However, after 1889 she saw little if any service on the V&T. It was not until 1902 that steady work came her way again. The EMPIRE was one of three 2-6-0 locomotives left on the V&T. The other two were the VIRGINIA and the TAHOE. The EMPIRE was in need of modernization and was equipped with air brakes, automatic couplers, and other safety appliances. She also acquired a sunflower stack. In 1910 she was converted to an oil burner and had a new cab and capped stack added. Because her enginemen felt the number 13 was unlucky she was renumbered #15 in 1910. In 1917 a Pyle generator and headlight were added but the locomotive was retired in 1918 and stored in the Carson City, Nevada roundhouse. In 1924 she was sold to the Pacific Portland Cement Company at Gerlach, Nevada, becoming their #501. She was retired for the second time in 1931 because of a burned crown sheet.

The EMPIRE was presented to the Railway & Locomotive Historical Society, Pacific Coast Chapter in 1938. She was stored in Berkeley and Oakland, California until 1966 when she was restored at the Bethlehem Shipyards in San Francisco. Her cab, pilot, stack, headlight, boiler jacket, tender beading and many other parts were renewed or replaced. She was then stored in the old Key System Inspection Barn at Oakland, awaiting eventual display.

In 1969 she was presented to the State of California for static display at Old Town in Sacramento, California where she has been under the roof of the California State Railroad Museum's Central Pacific Railroad Passenger Station. But this is not the end of her history. The EMPIRE is slated for restoration to her original condition in the near future. Thus, it would seem that the V&T enginemen were wrong when they said that the number 13 was unlucky, for this #13 has been very lucky.

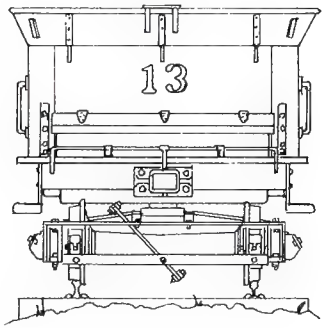


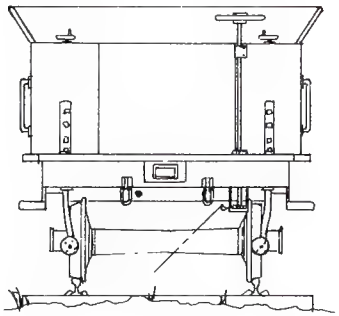


SCALE

12 6 0 1 2 3 4 5

3/16 inch = 1 foot





The MODELMAKERS NOTEBOOK

by Al Armitage

by Al Armitage
photos by the author

Something Different in Roofs – Part 2: Slate and Tile

Slate roofs are not quite as outstanding in appearance as the metal roofs I discussed in this column in the July/August issue. However, slate roofs have a number of things to recommend them to the modeler. They are very similar to wood shingle roofs but slate "shingles" are somewhat larger, with more surface exposed to the weather; this makes it easier to model them close to scale size. Slates have a smooth surface with a variety of textures, and are a dark, blue-gray color as a rule. This color is perhaps their most important feature because it provides a welcome change from the usual wood shingle roof. The gap between slates is usually more pronounced than that between wood shingles; this produces a "mechanical" pattern which makes the texture different than that of a wood shingle roof.

The drawings show several methods of laying slates. The most common style is almost identical to that of wood shingles. The "open" slating method results in a more decorative pattern and was used where ventilation was desired. The French pattern is totally different in appearance and is perhaps the most difficult to model. Even so, the variation of design might be well worth the extra effort.

Slate roofs were quite common on a wide variety of buildings, around the turn of the century, but of prime interest to the model builder is the fact that a great many railroad stations, large and small, had slate roofs. Most were of the "hip roof" design so I have shown several ways of treating the corners of a hip roof as well as a couple of ways to form the ridges. There are other methods but these should be more than adequate for modeling purposes.

The standard slate sizes are shown in one of the drawings. Note that each length comes in several widths. Note, too, that thickness varies from 3/16 inch to 2 inches allowing considerable leeway in the design of a roof. You should choose the size which best suits the size of the building you are modeling, of course. A 14-inch x 24-inch x 2-inch slate would look incongruous on a small structure just as a 6-inch x 10-inch slate would be ridiculous on a massive terminal building. For most model railroad structures, other than very small ones, I suggest using the 18-inch or 20-inch length in ¾-inch or 1-inch thickness. If you use random widths, don't use all the widths shown for a given size. Two or three are usually enough.

As a general rule, slates get chipped around the edges so don't make them too sharp and precise on a model. A little rounding of the corners and a bit of unevenness on the edges, as suggested in the sketches, will enhance the realism. Keep the rows even and straight along the bottom edges when you lay them. You don't want a "rustic" look. That's fine for a wood shingle roof but, remember, slates don't curl up the way shingles do. And, after all, you do want them to look different, don't you?

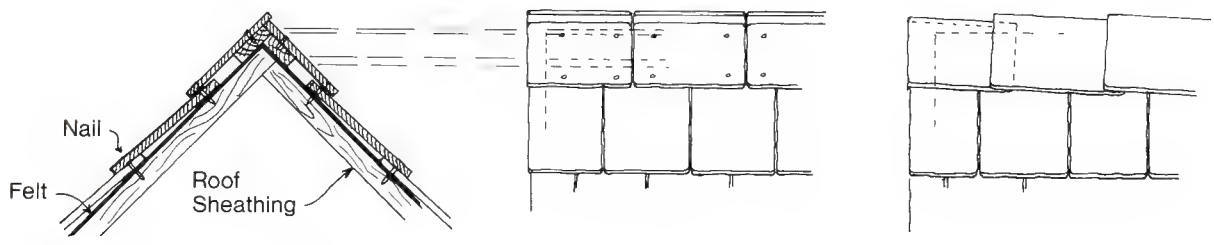
Probably, the most unusual, and impressive, style of roof is the Spanish tile type. It is, also, just about the toughest to model if it is done right. Just in case some of you are courageous (or foolhardy) enough to want to try it, I thought I'd include the proper information since it's certainly a different kind of roof. More properly called Mission tile, this type of roofing is very popular in the Southwest where it is ideally suited to the climate.

Real clay tile is not too practical for snow country where extreme cold would be apt to crack the tiles. There is, however, a commercial tile made of plastic which is finding favor in cold latitudes. For my money, it is not nearly as attractive as the real stuff but it is more durable as well as being more economical. It is laid in much the same manner as the clay tile. One of the sketches shows the shape of this type.

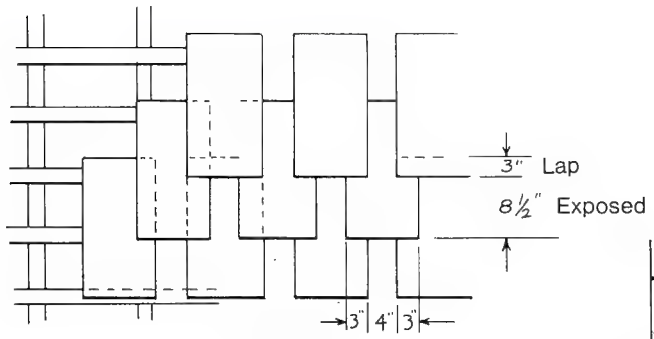
If you really want to model a tile roof, the other drawings will show you how real clay tiles are made and how to lay a roof with them. The photo shows what the prototype looks like, close up, and should help those of you who haven't had a chance to see the real thing.

I have seen several ways of "faking" a tile roof, none of which were too authentic looking. About the only really successful method is to do it like the prototype is done – with separate tiles. The big problem is that the tiles are *tapered,* from one end to the other, so they will "nest" properly. The only practical way to achieve this is to make a pattern of each type of tile. And then make a rubber mold from each in which to cast the tiles. Any one of several casting resins can be used to produce the tiles in quantity. If this seems too tedious, several rows of tile could be fabricated and used for a pattern for casting roof "sections". This would reduce the overall labor considerably of course, but you will have the problem of the "sections" showing up in the finished roof! Unfortunately, it is almost impossible to camouflage this. So there you have it – a really "different" roof! Some of you guys, who like to enter model contests, might try a building with real "tiles" and knock 'em dead! Good luck!

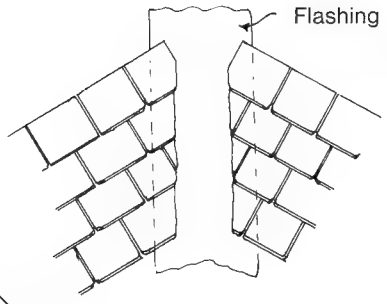
Next time out, we'll talk some about the design of structures and fitting them into your layout space.



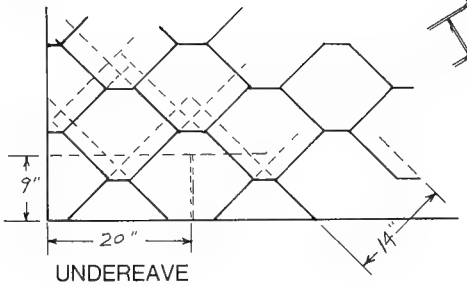
SECTION SADDLE RIDGE STRIP SADDLE RIDGE



OPEN SLATING

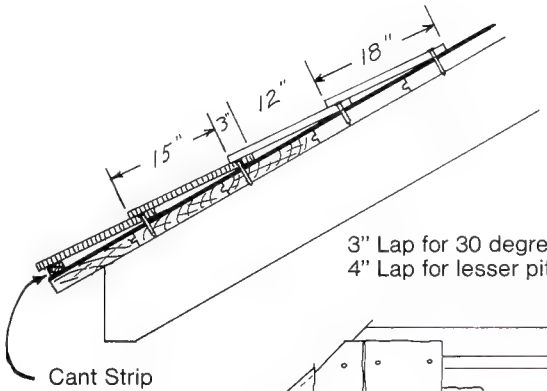


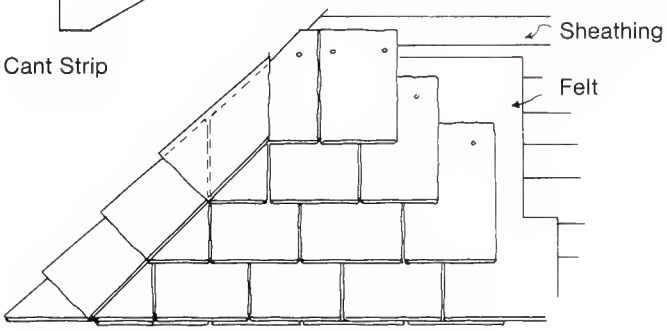
OPEN VALLEY



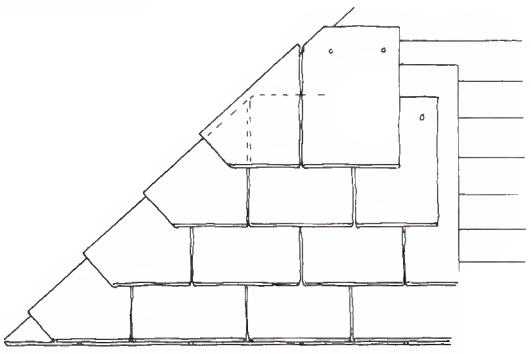
UNDEREAVE SLATE

FRENCH METHOD

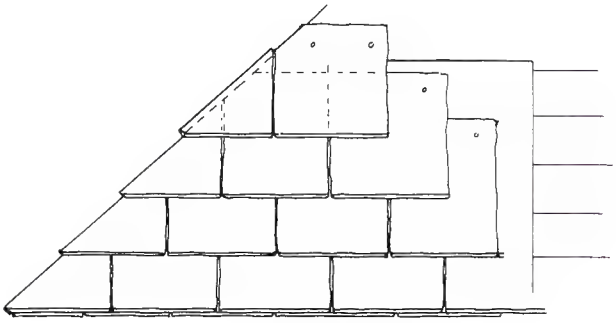




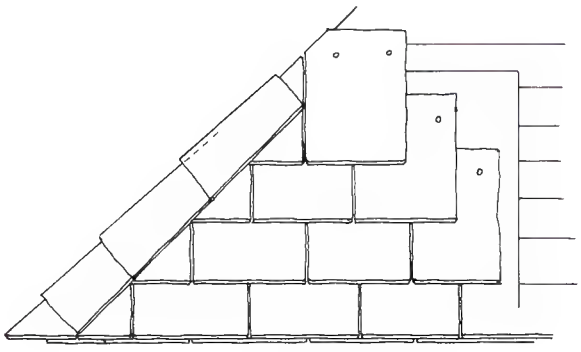
BOSTON HIP



FANTAIL HIP

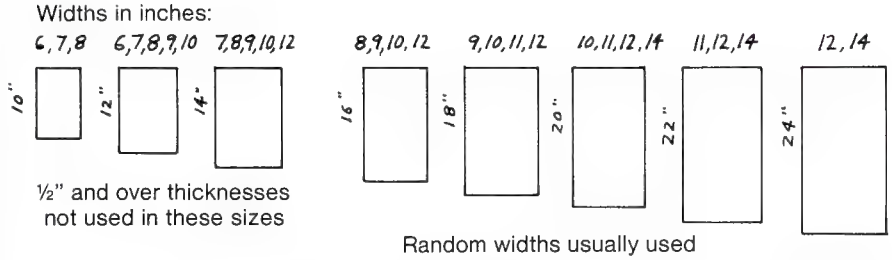


MITERED HIP



SADDLE HIP

Widths in inches:

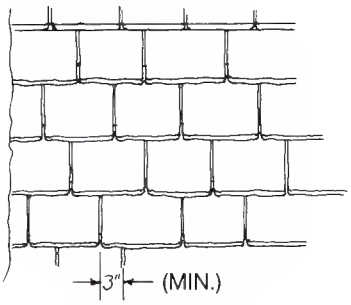


½" and over thicknesses not used in these sizes

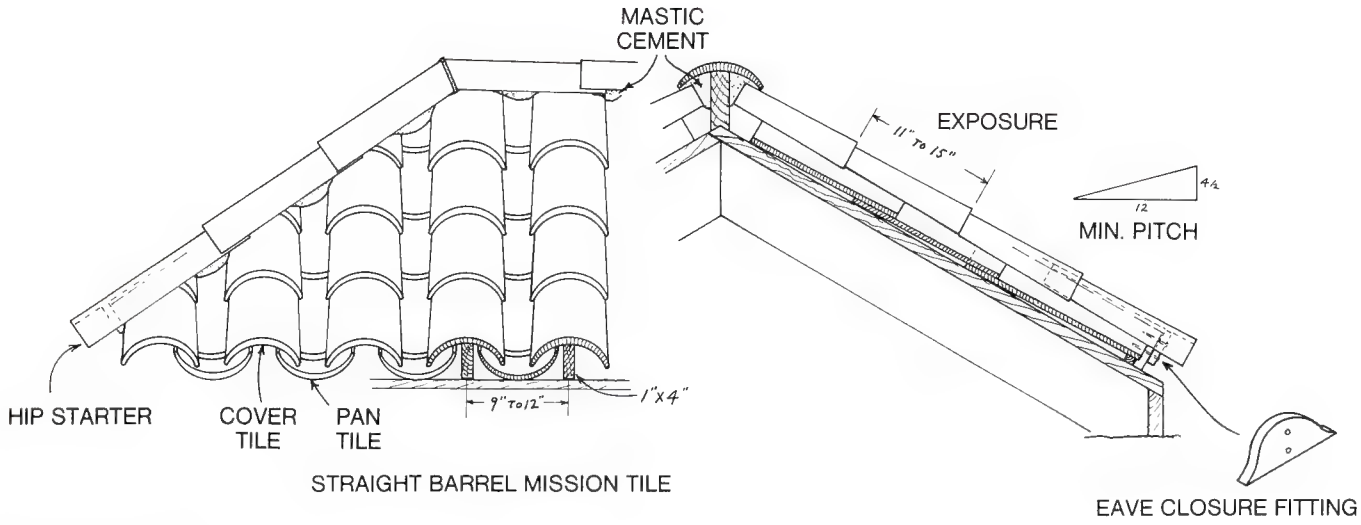
Random widths usually used

Slates split in these thicknesses: 3/16, 1/4, 3/8, 1/2, 3/4, 1, 1-1/4, 1-3/4, 2

STANDARD SLATE SIZES

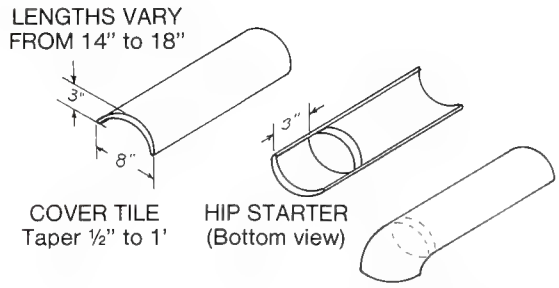


PROPER JOINTING



STRAIGHT BARREL MISSION TILE

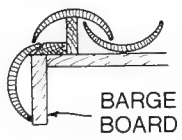
EAVE CLOSURE FITTING



COVER TILE
Taper ½" to 1'

HIP STARTER
(Bottom view)

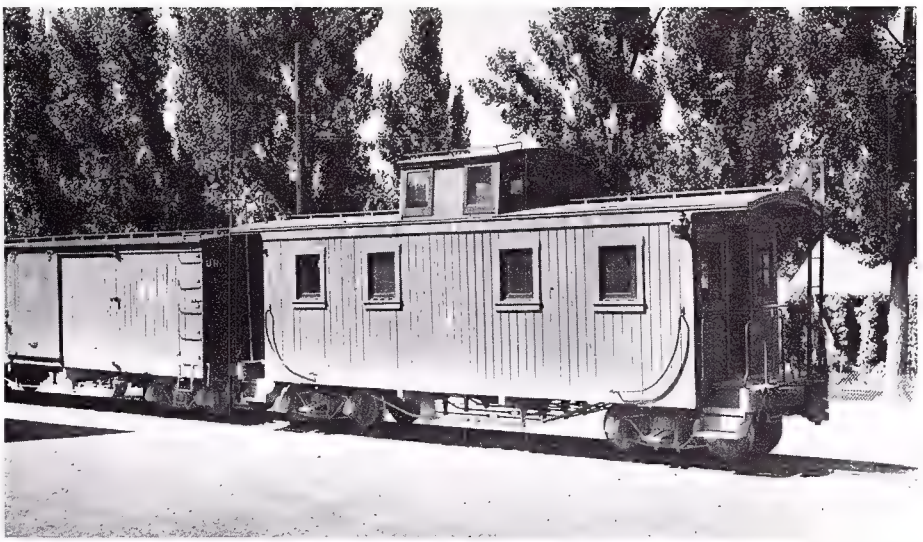
HIP STARTER



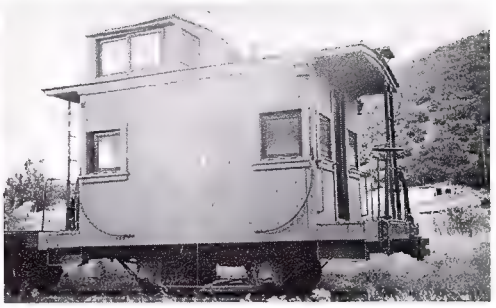
EDGE COVER

MODERN PLASTIC TILE

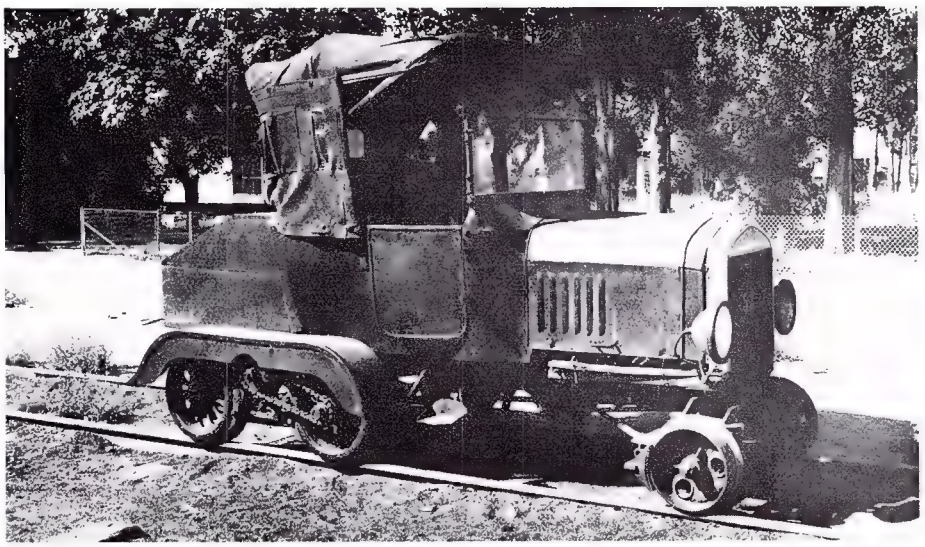
Here's what real "mission" tile looks like if you're ambitious enough to try modeling it.



A "Classic" style of caboose. This late afternoon photo was taken in June, 1938 at Mack one year before abandonment. *Photo by Ken Frick, collection of Ted Wurm.*



What a marvelous caboose model this prototype would make. This "main line" looking bobber was a rare breed on western narrow gauge lines. The color was red. This shot was taken at Atchee on July 17, 1939. *Photo by Ted Wurm.*



A prototype itching to be modeled. This little rail car was photographed at Mack in 1939. *Photo by Ted Wurm.*

Number 21 had been deadlined for some years when this photograph was taken at Atchee in 1939. *Photo by Ted Wurm.*

The Uintah Railway

A Twilight View

by Ted Wurm

NOTE: This article is excerpted from a book in preparation describing a 31-day rail photo trip by car in 1939. Colorado was the major area of interest.

Even in 1939, the Colorado narrow gauge rail lines acted as powerful magnets drawing railfans into the area. Inspired and encouraged by stories and articles in **RAILROAD MAGAZINE,** the "Bible" of the International Engine Picture Club, fans worked and saved all year in order to buy film and pay for the trip. **RAILROAD** featured an annual survey of narrow-gauge railroads then running in the United States. It was often a dismal story of abandonments, but Colorado stood apart as an area where there was still more than enough for everyone. One annual bright light was the Uintah Railway in western Colorado; its future was secure, according to the survey, because it carried a needed commodity out of an otherwise inaccessible area.

Several railfans struck out for Colorado in 1939, including one excursion trainload. Perhaps the surprise discontinuance of the "secure" Uintah Ry. in May encouraged them to get to the narrow gauges before it was too late. D&RGW and Colorado & Southern branches were getting the axe, and the handwriting was on the wall for other 36 inch trackage. After months of saving and planning, I set out

Atchee in the rays of the setting sun in 1939. Note the deserted equipment stored to the left. The shops are in the center and the enginehouse is at the right where the mainline comes up from the Mack line to Baxter Pass on the left. *Photo by Ted Wurm.*

Looking north from Atchee up the steepest part of the Uintah. Across the hillside is the 7½% grade of the Baxter Pass. *Photo by Ted Wurm.*

This boxcar was found at Mack in June 1938. Notice the high air hose and the buffer blocks on the end sills. *Photo by Ken Frick.*

early in July with Bob Gray, present-day rebuilder and operator of the Virginia & Truckee at Virginia City. Heading east by car from Oakland, we photographed every railroad in sight and finally reached Colorado early on the seventh day.

Just a few miles into the domain of the narrow gauges we saw a road sign for Atchee, pointing north up a narrow dirt road, which soon came to and paralleled the Uintah Ry. Rather than going into the junction settlement of Mack, we turned onto the dirt and hurried along with great anticipation. We didn't reach Atchee that morning, however. The "road" was crossed by scores of gullies and other dips where winter rains apparently flowed from the mountains. Suddenly one of these unmarked hazards threw our car across the roadside ditch and into a pile of sagebrush. There we were stuck fast, with damaged grill, dented fender, a strange noise underneath and, of course, very limited funds in our pockets. It looked like the end of a fine fan trip.

Some people in a passing pickup pulled us back onto the road and we drove gingerly 35 miles or so into the nearest city, Grand Junction. It was Sunday, but in those days there was always at least one garage or shop open. we spent about $5, which was enough to eliminate the grinding noise, remove or stabilize a few dented parts, and make the 1935 Chrysler look good. It ran well, so we decided to let the body work wait until we returned home.

Then it was right back to Mack, where the Uintah met "The Grande." Since it was getting late and we were on a very tight schedule, we decided to get pictures of what was available at Mack and then hasten into the mountains to Atchee before sundown. We photographed Uintah boxcars and flats, and the D&RGW station showing the narrow-gauge steel combination #50 alongside. Model T inspection car #52 was standing there as well, but engine #50, one of the Mallet tanks, was securely locked in a one-stall enginehouse. The unique Uintah air brake connections caught our attention. Joined about three feet above ground level, they were presumably easier to work with and lessened freezing dangers. While checking these, we were thrilled to the blast of D&RGW 3705, one of the brand-new 4-6-6-4's, roaring past with a westbound freight.

We again headed up the dirt road to Atchee, going northward over fairly open country for about twelve miles, and then up an ever-narrowing canyon until at Atchee the mountains almost closed in on both sides and up ahead. We had come 28 miles from Mack up a steadily increasing grade, crossing tracks of the Uintah seventeen times. It took an hour by the dirt road; train #1 had been scheduled for an hour and three-quarters for the same distance in the company's last timetable. Bob Gray remembers being especially impressed by the mine setup and track layout at Carbonera, a few miles below

Atchee, where the Uintah mined coal for locomotive fuel and other purposes.

At Atchee a depressing quiet filled the former busy village and railroad yards. We found a few houses, nearly all deserted, an abandoned school, a small hotel and general store. The car and locomotive shops were tightly closed, hiding well-equiped interiors that had built many cars and even one locomotive. There was the two-stall enginehouse, the water tank, a coaling trestle off to the right, storage tracks full of wonderful equipment, and even a wye crowded into that narrow canyon. The two compact 0-6-2 tank locomotives had apparently been stored outside for a long time, along with a wedge plow, ditcher, and numerous cars. The remains of a Shay lay ominously beside the little tank engines, which were partly dismantled.

Walking across a sturdy wooden trestle beyond the yard area, in the last rays of the setting sun, we climbed atop a deserted wedge snowplow and looked with wonder at the tracks climbing in the distance that famous 7 and ½ percent grade of Baxter Pass, where the timetable called for one hour to cover six miles and the tank Mallets were rated to draw a mere 90 tons (for Shays 5 and 7 it was 60). In passenger train days, the 0-6-2T's pulled a single combination car up this steep hill. It was easy to visualize a trail of smoke against the far mountainside as one of the famous articulateds climbed the grade with a string of empties. We took a shot looking up the still shiny rails and another looking across the trestle at the remains of Atchee, sinking into its last slumber at the grand old age of barely 35 years.

The sun had gone behind the hills, but enough light remained to hurry through the yards, snapping any equipment that wasn't obstructed. Trains of empty cars were stopped just as they'd arrived on the last trains, and caboose #1 sat at the end of one string with her marker lights still in place (imagine that happening today!) We photographed engine #21, cabooses #1 and #3, flatcars, and dump or ore car #312. A watchman came out of one of the small homes and gave us a guided tour of the shops and roundhouse. Inside we looked reverently at Shays #5 and #7, shapely Mike #40, and tank mallet #51. That left only engine #30 unaccounted for and we were told that this 2-8-2 was out of service at Dragon on the other side of the "the hill."

The watchman gave us each a souvenir copy of the final employees' timetable and some loco boiler inspection slips. then he advised us to go over to engine #21 and take the headlight and number plate, which had been loosened in preparation for scrapping. With a well-packed car we headed back down the small dirt road, leaving Atchee in darkness. It was hard to imagine that in only a few months this really unusual narrow-gauge railroad would be just a memory.

The D&RGW station at Mack in 1939. *Photo by Ted Wurm.*

A homemade combination car. It was built at the Atchee shops from the body of an older car. It had an AC&F builders plate from the original body. *Photo by Ted Wurm.*

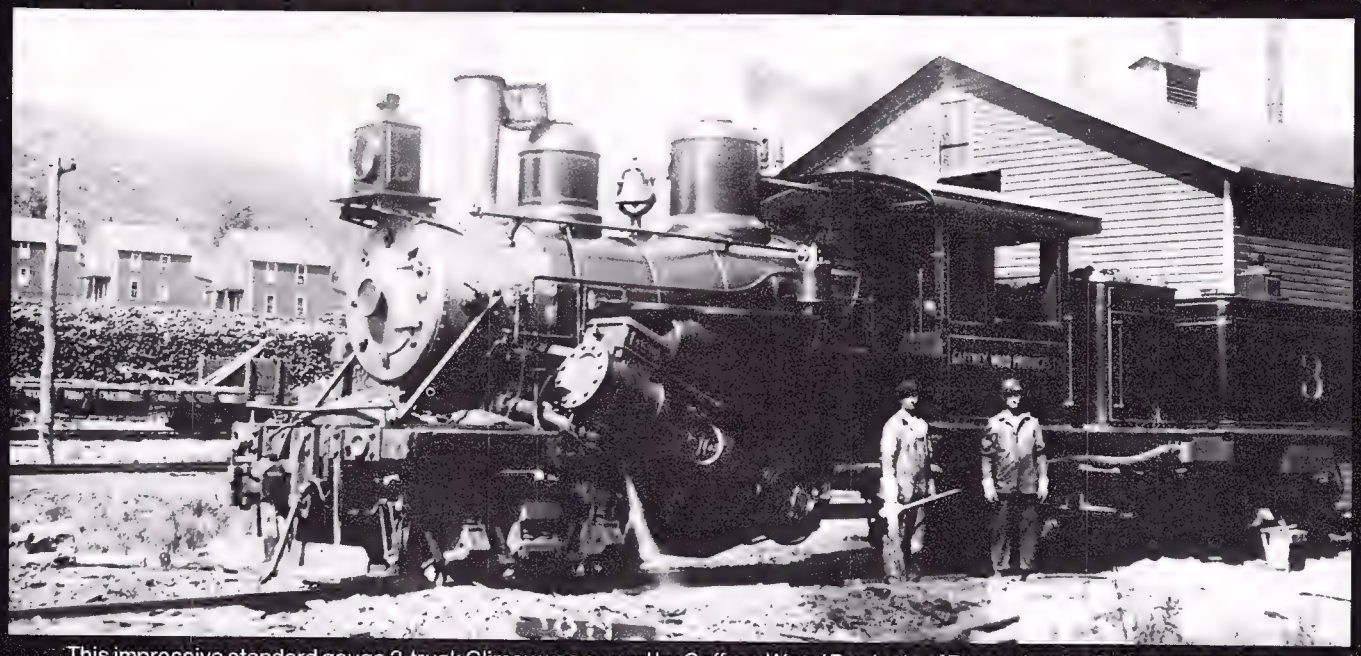
Look carefully at the air hose mounting on this flat car. Notice how high in the air it is mounted. Also notice the buffers on the end sill. This photo was taken at Mack in 1939. *Photo by Ted Wurm.*

GAZETTE GALLERY

Edited by Gene Deimling

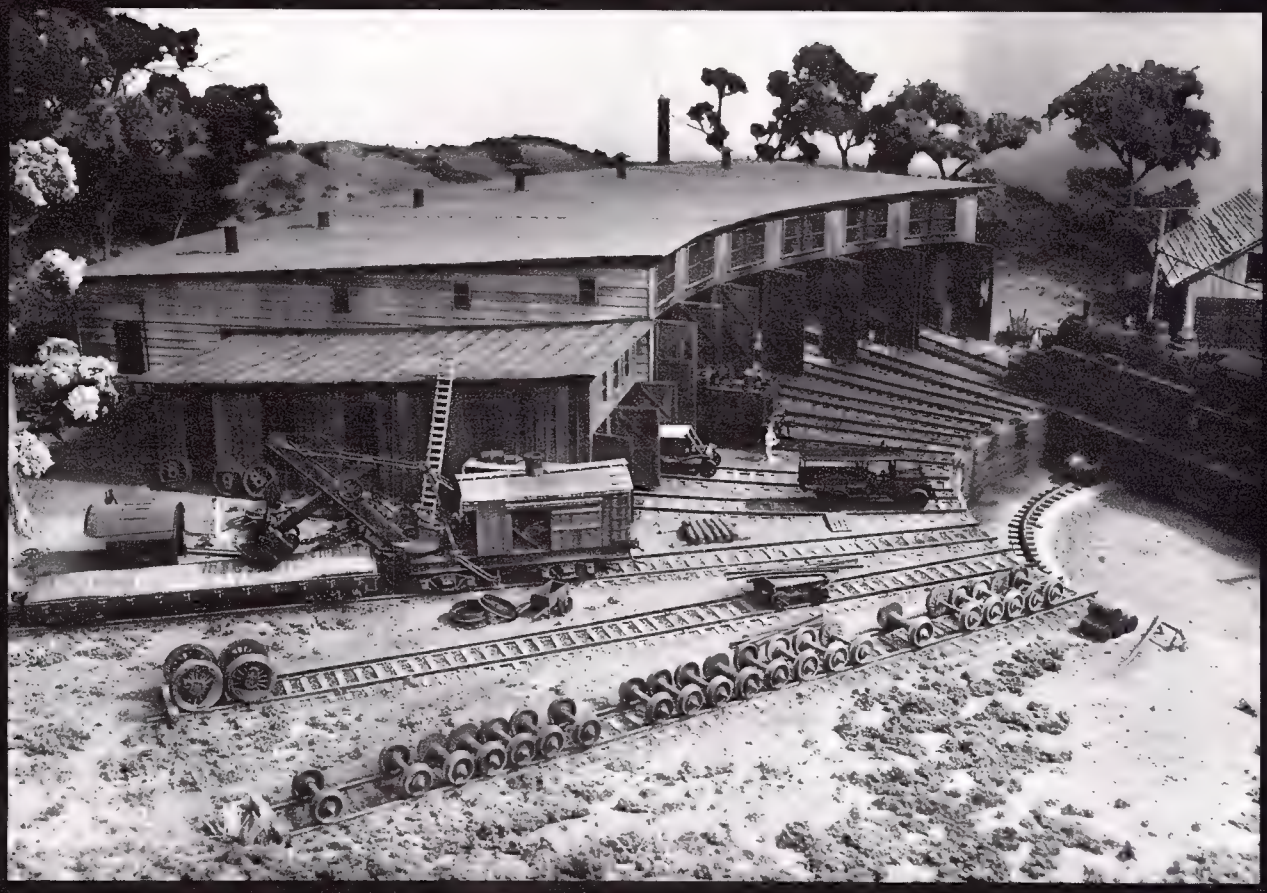
This C-16 was caught cooling its heels in front of the Durango depot on July 2, 1937. *Photo, collection of Mallory Hope Ferrell.*

Ace photographer John Krause caught #345 drifting towards the Durango depot. The year was 1950. It would have been nice to be standing next to John sampling the aroma of working steam. *Photo, courtesy of J&D Studios.*

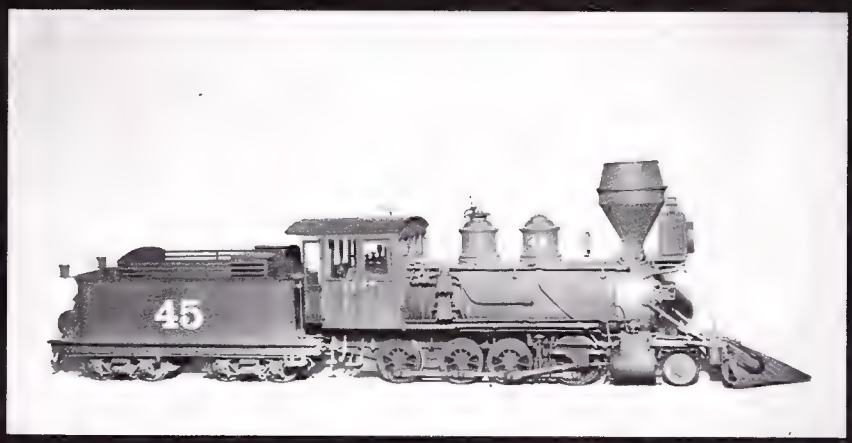


This impressive standard gauge 3-truck Climax was owned by Gaffney Wood Products of Pennsylvania. Gaffney was a large producer of wood alcohol products. The "company" houses in the background probably were built for Gaffney employees. *Photo, collection of Howard Matteson. Restored by Bill Glass.*

This wonderful photo by Deane Mellander of East Broad Top's #12 should warm the hearts of eastern narrow gauge lovers. The photo was taken in Rockhill Furnace, Pennsylvania during the 1974 Winter Spectacular. This once mighty coal hauling narrow gauge line will be featured in the **GAZETTE** next year. We are looking for photos of EBT models and the prototype taken prior to its revival as a tourist line.



Sierra #38 is about to pull into the Jamestown roundhouse on Artie Winesdorfer's HO gauge Sierra Railroad. The roundhouse and attached speeder shed were scratchbuilt by Artie. The prototype for this scene is still in existence as part of the Sierra Railroad's museum. *Photo by Rich Lokey.*



Here are two recent additions to John Robinson's extensive On3 roster. The E.B. & W #5 is a reworked NorthWest Shortline 4-4-0. John patterned the model after South Pacific Coast #3. A total of $325.00 was needed for the engine and castings used in this excellent model. The E.B. & W. #45 is a close replica of the Denver South Park & Pacific #202. John made extensive use of Kemtron C-16 parts to build this fine model. Power is provided by a Grandt micro motor drive. *Photos by John Robinson.*

Bill Garlock is responsible for this neat On3 caboose. The wooden body is scratchbuilt with added details from Grandt, Kemtron and the Backshop. Bill used Hot Stuff, an ACC cement, to assemble this model rather than the usual wood-type cement. Doctor S.D. Marty is the proud owner of this appealing little caboose. *Photo by S.D. Marty.*

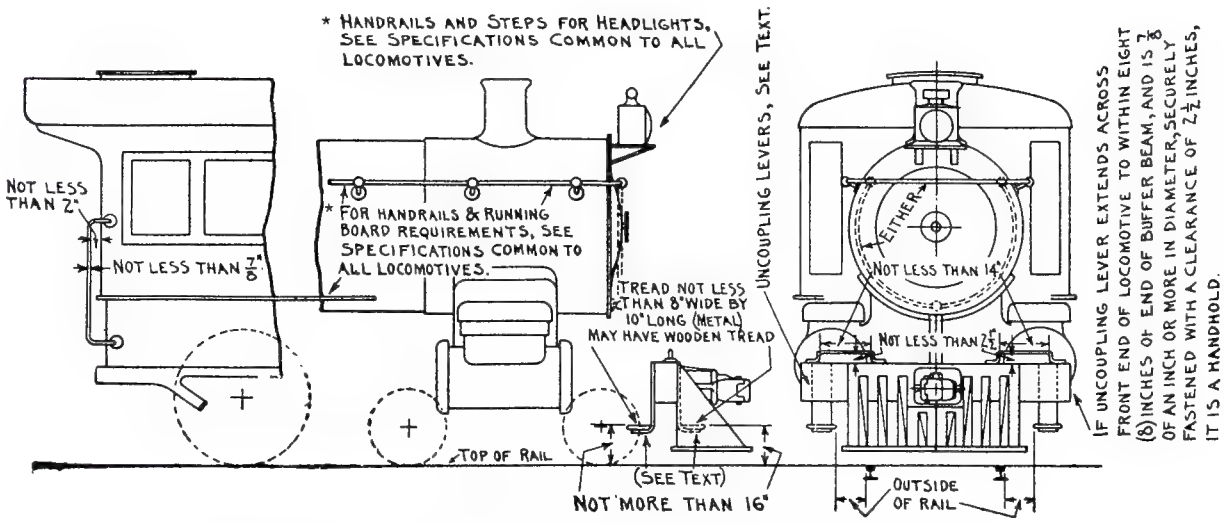
GAZETTE author Irv Schulz is the man behind this vintage modeling in HO scale. Irv used ground foam extensively in his scenery work. The railroad was featured in color a number of years ago in **THE MODEL RAILROADER.** *Photo by Leo Knight.*

STRAIGHT TALK ABOUT BENT PIPES

by Charles H. Givens

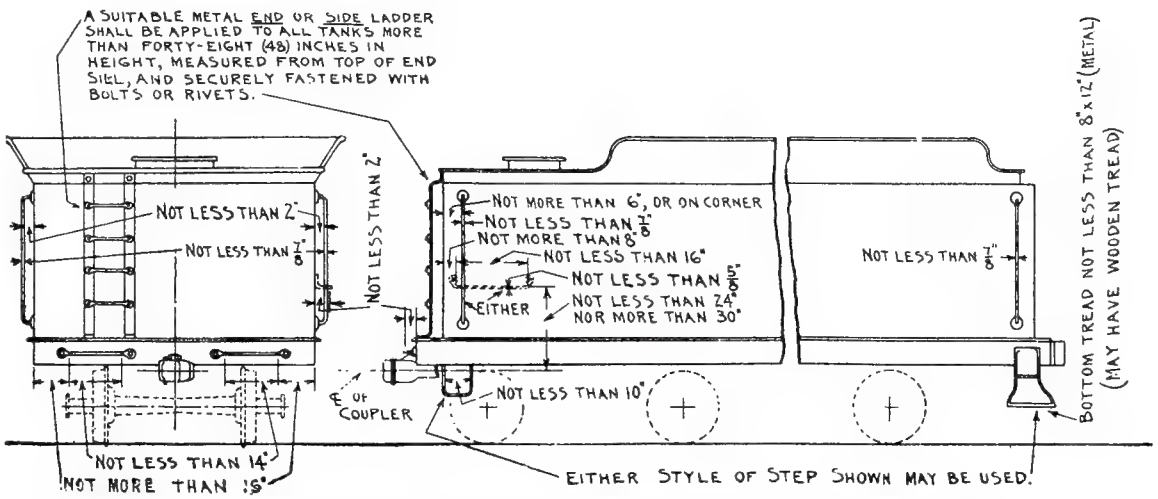
If you model most any American railroad from 1915 to 1955 or so, your steam motive power should conform to the standards presented here and in the next Bent Pipes in January. These standards were mandatory on all ICC roads and were followed by most industrial and logging lines as well. Many states had industrial safety laws before OSHA. State standards were similar to the ICC standards.

Only very specialized service, such as some steel mill or mine switching service might have had other standards. Very decrepit operations might knock off some parts and not replace them, but in general, equip your motive power as illustrated and your road will be legal!

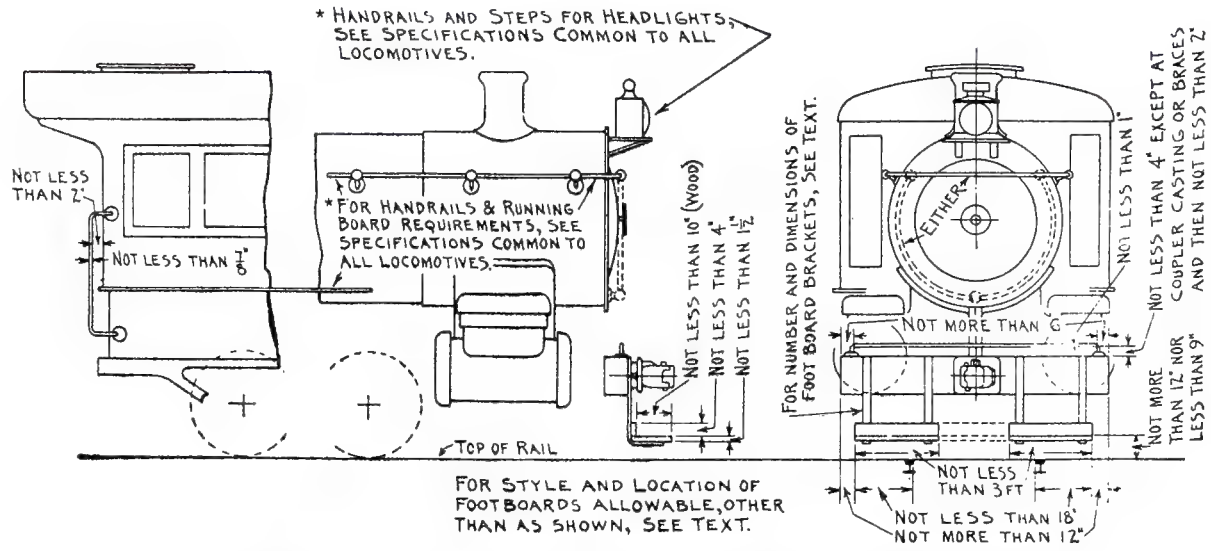

* HANDRAILS AND STEPS FOR HEADLIGHTS, SEE SPECIFICATIONS COMMON TO ALL LOCOMOTIVES.
* FOR HANDRAILS & RUNNING BOARD REQUIREMENTS, SEE SPECIFICATIONS COMMON TO ALL LOCOMOTIVES.
NOT LESS THAN 2"
NOT LESS THAN 7/8"
TREAD NOT LESS THAN 8" WIDE BY 10" LONG (METAL) MAY HAVE WOODEN TREAD
UNCOUPLING LEVERS, SEE TEXT.
EITHER
NOT LESS THAN 14"
NOT LESS THAN 2 1/2"
IF UNCOUPLING LEVER EXTENDS ACROSS FRONT END OF LOCOMOTIVE TO WITHIN EIGHT (8) INCHES OF END OF BUFFER BEAM, AND IS 7/16 OF AN INCH OR MORE IN DIAMETER, SECURELY FASTENED WITH A CLEARANCE OF 2 1/2 INCHES, IT IS A HANDHOLD.
TOP OF RAIL
(SEE TEXT)
NOT MORE THAN 16"
OUTSIDE OF RAIL

Application of Safety Appliances on Steam Locomotives Used in Road Service.

*These specifications will appear in the January issue.

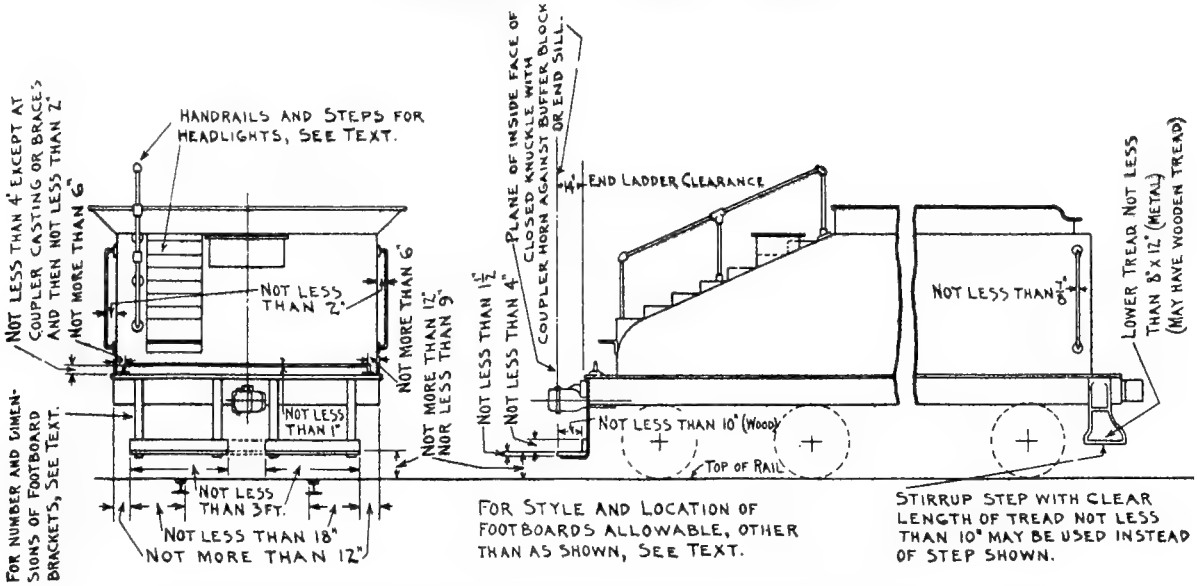

A SUITABLE METAL END OR SIDE LADDER SHALL BE APPLIED TO ALL TANKS MORE THAN FORTY-EIGHT (48) INCHES IN HEIGHT, MEASURED FROM TOP OF END SIEL, AND SECURELY FASTENED WITH BOLTS OR RIVETS.
NOT LESS THAN 2"
NOT LESS THAN 7/8"
NOT LESS THAN 2"
NOT MORE THAN 6", OR ON CORNER
NOT LESS THAN 7/8"
NOT MORE THAN 8"
NOT LESS THAN 16"
NOT LESS THAN 5"
EITHER
NOT LESS THAN 24" NOR MORE THAN 30"
NOT LESS THAN 7/8"
BOTTOM TREAD NOT LESS THAN 8" X 12" (METAL) (MAY HAVE WOODEN TREAD)
E OF COUPLER
NOT LESS THAN 10"
NOT LESS THAN 14"
NOT MORE THAN 15"
EITHER STYLE OF STEP SHOWN MAY BE USED.

Application of Safety Applicances on Tender of Steam Locomotive Used in Road Service.


* HANDRAILS AND STEPS FOR HEADLIGHTS, SEE SPECIFICATIONS COMMON TO ALL LOCOMOTIVES.
*FOR HANDRAILS & RUNNING BOARD REQUIREMENTS, SEE SPECIFICATIONS COMMON TO ALL LOCOMOTIVES.
NOT LESS THAN 2"
NOT LESS THAN 7/8"
NOT LESS THAN 10" (WOOD)
NOT LESS THAN 4"
NOT LESS THAN 1½"
TOP OF RAIL
FOR STYLE AND LOCATION OF FOOTBOARDS ALLOWABLE, OTHER THAN AS SHOWN, SEE TEXT.
FOR NUMBER AND DIMENSIONS OF FOOT BOARD BRACKETS, SEE TEXT.
EITHER
NOT LESS THAN 1"
NOT MORE THAN 6"
NOT LESS THAN 4" EXCEPT AT COUPLER CASTING OR BRACES AND THEN NOT LESS THAN 2"
NOT MORE THAN 12" NOR LESS THAN 9"
NOT LESS THAN 3FT
NOT LESS THAN 18"
NOT MORE THAN 12"

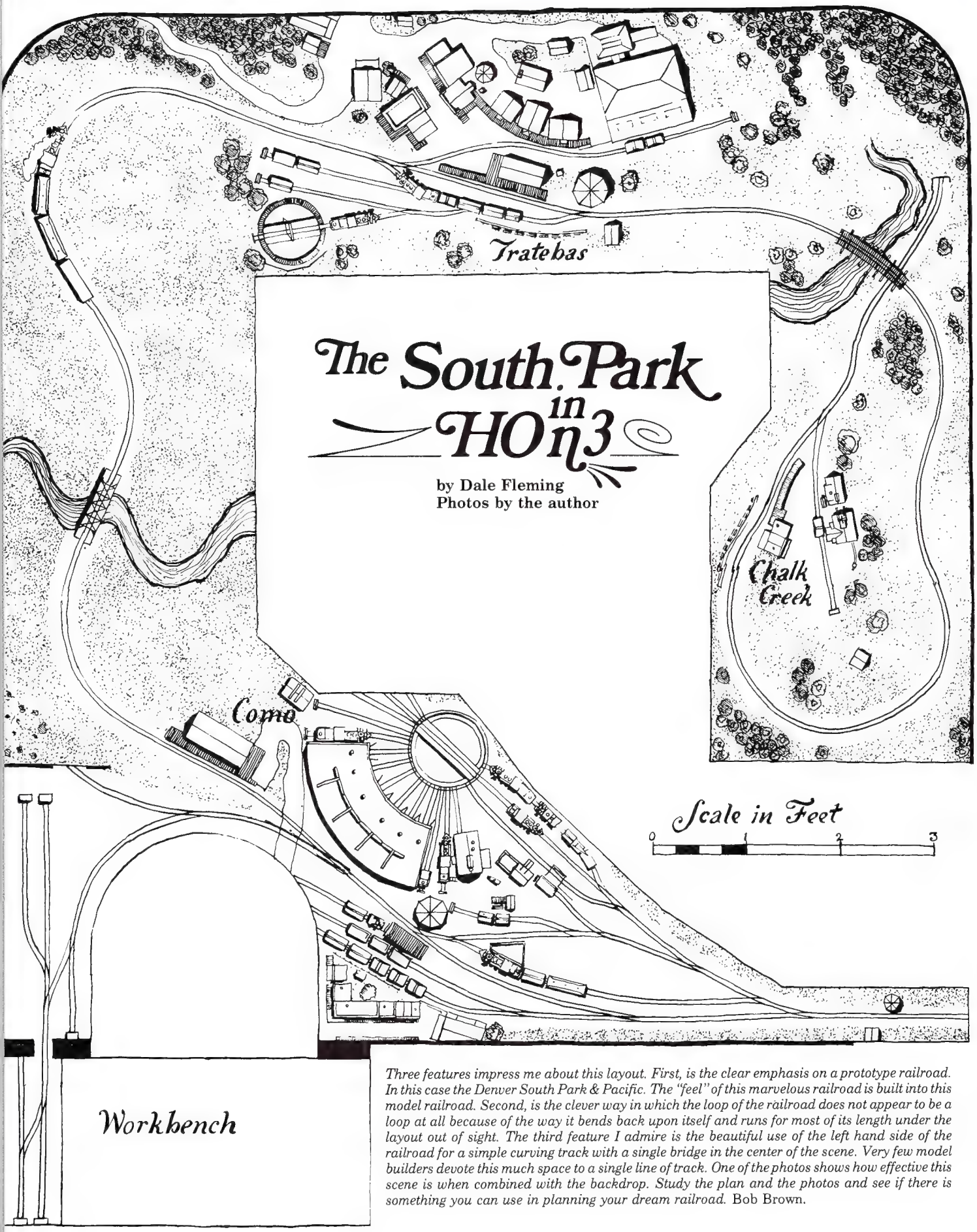
Application of Safety Appliances on Engine of Steam Locomotive Used in Switching Service.

*These specifications will appear in the January issue.


HANDRAILS AND STEPS FOR HEADLIGHTS, SEE TEXT.
NOT LESS THAN 4" EXCEPT AT COUPLER CASTING OR BRACES AND THEN NOT LESS THAN 2"
NOT MORE THAN 6"
NOT LESS THAN 2"
NOT MORE THAN 6"
NOT LESS THAN 1"
NOT MORE THAN 12" NOR LESS THAN 9"
FOR NUMBER AND DIMENSIONS OF FOOTBOARD BRACKETS, SEE TEXT.
NOT LESS THAN 3FT.
NOT LESS THAN 18"
NOT MORE THAN 12"
PLANE OF INSIDE FACE OF CLOSED KNUCKLE WITH COUPLER HORN AGAINST BUFFER BLOCK OR END SILL.
END LADDER CLEARANCE
NOT LESS THAN 1½"
NOT LESS THAN 4"
NOT LESS THAN 10" (WOOD)
TOP OF RAIL
FOR STYLE AND LOCATION OF FOOTBOARDS ALLOWABLE, OTHER THAN AS SHOWN, SEE TEXT.
NOT LESS THAN 7/8"
LOWER TREAD NOT LESS THAN 8" X 12" (METAL) (MAY HAVE WOODEN TREAD)
STIRRUP STEP WITH CLEAR LENGTH OF TREAD NOT LESS THAN 10" MAY BE USED INSTEAD OF STEP SHOWN.

Application of Safety Appliances of Tender of Steam Locomotive Used in Switching Service.

A C-16 drifting through South Park. The Como station roof is in the foreground. The wires on the bridge were made out of straw flower stems. This photo shows how effective such a simple scene can be. A C-16 on the South Park is the result of the South Park mistakenly hiring a photographer recommended by a Denver & Rio Grande fan.



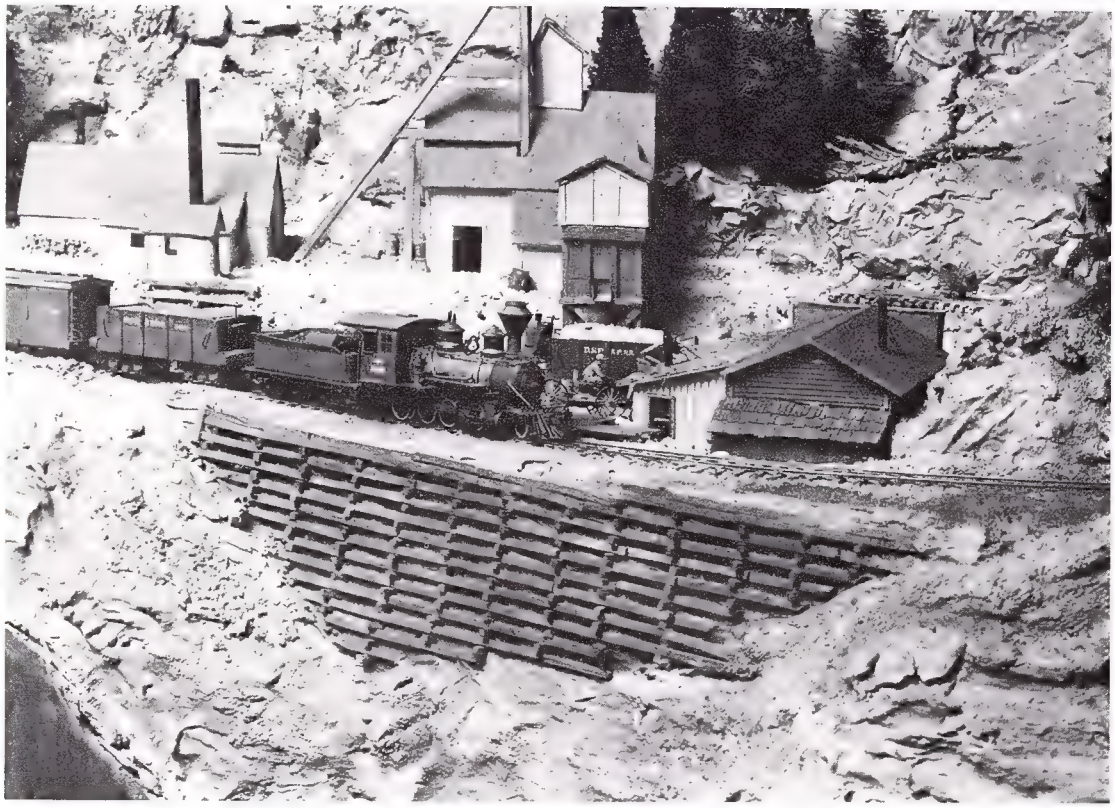
The South Park in HOn3

by Dale Fleming
Photos by the author

Three features impress me about this layout. First, is the clear emphasis on a prototype railroad. In this case the Denver South Park & Pacific. The "feel" of this marvelous railroad is built into this model railroad. Second, is the clever way in which the loop of the railroad does not appear to be a loop at all because of the way it bends back upon itself and runs for most of its length under the layout out of sight. The third feature I admire is the beautiful use of the left hand side of the railroad for a simple curving track with a single bridge in the center of the scene. Very few model builders devote this much space to a single line of track. One of the photos shows how effective this scene is when combined with the backdrop. Study the plan and the photos and see if there is something you can use in planning your dream railroad. Bob Brown.

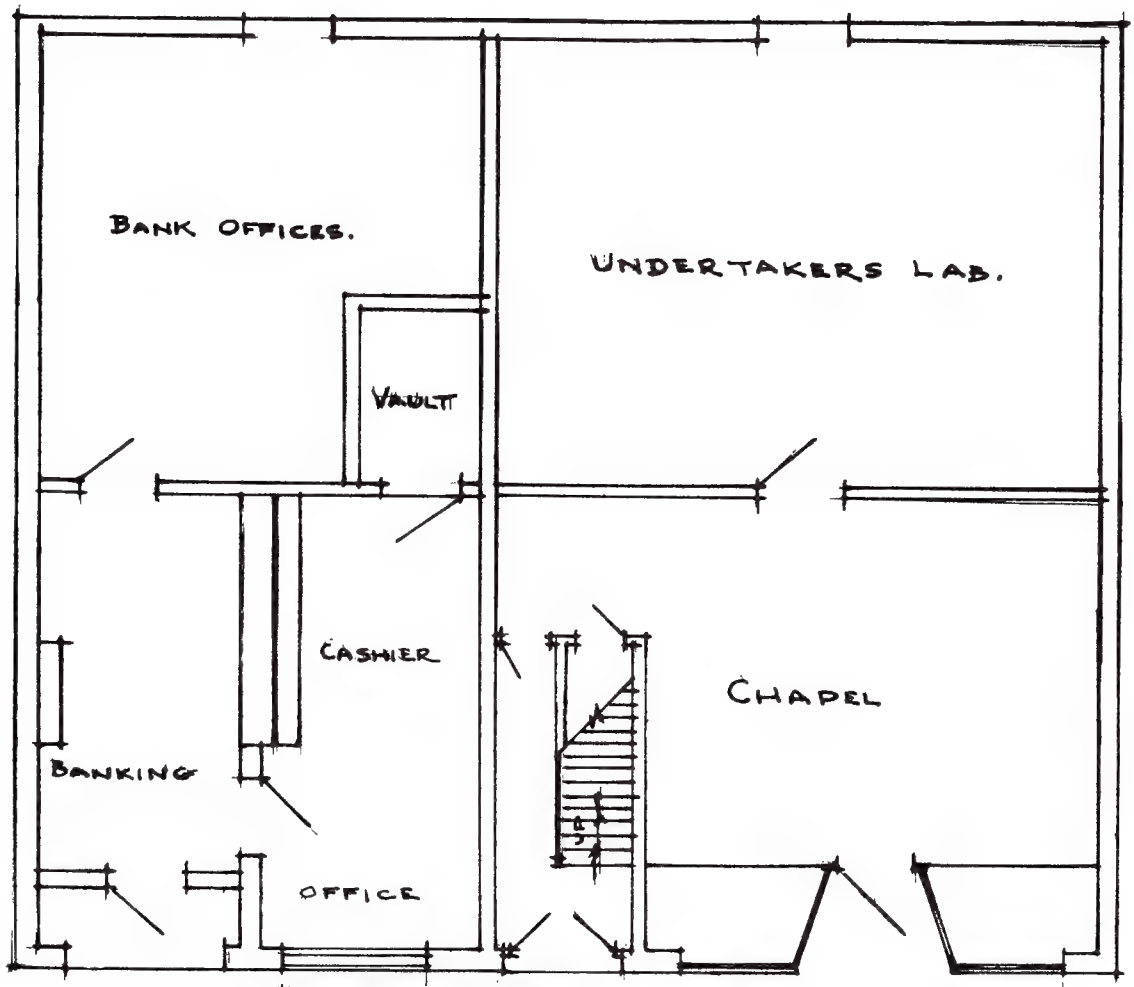
This photo shows the turntable at Tratebas with the "Dillon" waiting patiently to be turned. The two box cars were built from Simpson kits. Some of the trees in the background are from Campbell kits. However, most of them are made out of binder twine as described in the Feb. 1976 **RAILROAD MODEL CRAFTSMAN.**

A train passing the Yankee Lady Mine. This mine was built from photos of the Golden Coin mine in Victor, Colorado.



FARMERS BANK BUILDING ~ Ridgway, Colorado

Drawn by Karl E. Parshall
3.5mm = 1 foot



FIRST FLOOR PLAN

FRONT ELEVATION
SCALE 3.5MM=1'0"

K-28's IN HAWAII? YES

1879-1979

Yes! Built from the D&RGW K-28 2-8-2 plans, numbers 60, 70, 80, and 90 were in regular service on the Oahu Railroad. Hawaii had standard gauge, 3 foot, 30 inch and 2 foot gauges. All of these are illustrated in the new **1979 HAWAIIAN CENTENNIAL CALENDAR** by Jay Conde. Complete with 12 full color paintings by Mike Kotowski.

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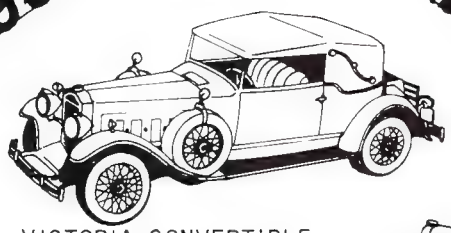
1929 PACKARDS

H.O. SCALE



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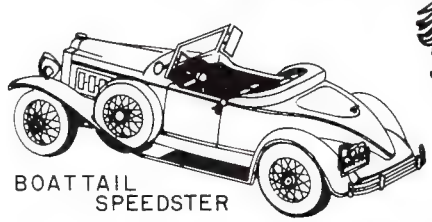

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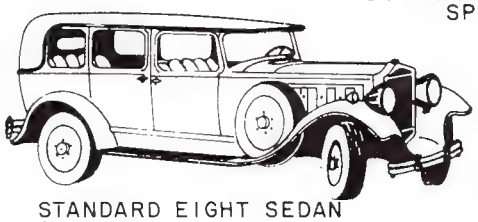
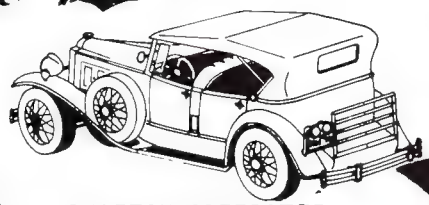
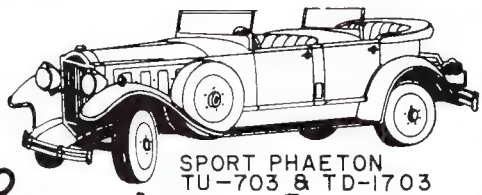


STANDARD EIGHT SEDAN
SE-706

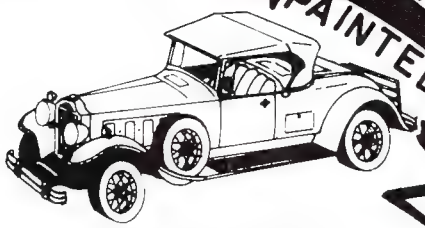


PHAETON SPEEDSTER
TU-701 & TD-1701

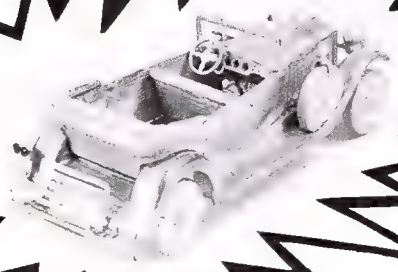
PHOTO UNPAINTED

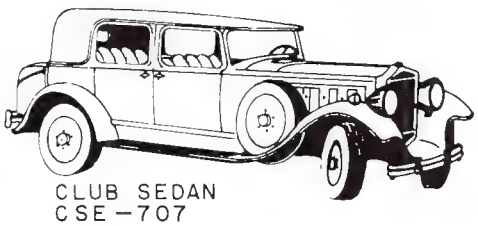


SPORT PHAETON
TU-703 & TD-1703



ROADSTER COUPE
TU-702 & TD-1702





CLUB SEDAN
CSE-707

TU = TOP UP MODEL
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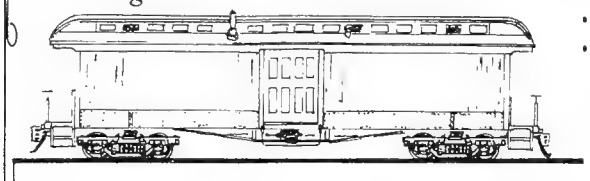

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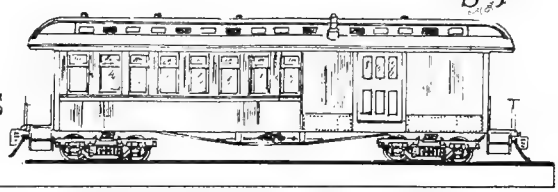

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Book Reviews

Auto Handbooks
Dover Publications, Inc.
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Mic Greenberg put me onto this excellent series of paper backs. Dover has reprinted a series of three books originally published by the Association of Licensed Automobile Manufacturers. These handbooks list hundreds of vintage autos and trucks and are a goldmine of information for anyone who wants to build accurate vintage models. The first volume is for the 1904-06 period and sells for $5.00. The second book covers the 1915-16 period and sells for $4.00. The third volume covers the 1925-26 period and sells for $5.00. Each book is about 400 pages long. Each page has a drawing of a different auto or truck and complete specifications on that model of vehicle. These are artist's renditions and not plans. Ask for ALAM Handbooks when you order your set. *Bob Brown.*

Mineral Belt Vol. II
Sundance Pubs., Ltd.
Silverton, CO 81433

In the Sept/Oct **GAZETTE,** I expressed some critical comments about Volume I of the *Mineral Belt.* Well Volume II has more than compensated for any failings of Volume I.

This volume covers the old South Park, and especially the Alpine Tunnel route over the Great Divide. Unlike Volume I, this one is almost all railroad oriented. It pictures the Colorado & Southern operations from Como to Gunnison, including Boreas Pass to Leadville. Numerous photographs, many unpublished, add immeasurably to an understanding of the text. While the text still reflects the author's personal interests, this is to a lesser extent than in the earlier volume. The frequent color photographs are well selected and bring a contemporary feel to this work. An envelope full of sepia tone William Jackson prints is the icing on the cake.

This volume, even taken with Volume I, is still not the authoritative work on the South Park. But, it is one fine railroad book. It is a definite must for Colorado buffs. Even if you disliked Volume I, I urge you to to examine Volume II; it's well worth it. *Charlie Getz.*

Tragic Train —
The City of San Francisco
by Don DeNair
Superior Publishing Co.
Seattle, Washington

I'm always on the lookout for interesting or unusual books and *Tragic Train* certainly qualifies. While not about narrow gauge or short line operations, *Tragic Train* does merit your attention. It's about Southern Pacific's famed City of San Francisco streamliner which operated from Chicago to San Francisco. To explain its title, the entire book is devoted to a terrible wreck which occurred in Nevada in 1939, involving that train at the cost of many lives.

The wreck is unique because it was deliberately caused. The rail was tampered with, forcing the cars to crash into a bridge and river. Although a massive manhunt was launched and many clues were uncovered, the culprits were never caught.

The book is a fascinating account of that tragic trip, the wreck and its aftermath. For the first time, SP files were made available to the author, resulting ina wealth of information. Survivors and crew were tracked down and interviewed to provide a personal account of this horrible wreck. Many photographs portray the events described, making this perhaps the best documented train wreck in history.

The book is not ghoulish – rather, it is a fascinating story in an authentic setting. It's well written, informative, exciting, and true. I can't think of a better combination for any rail book. It retails at $14.95. *Charlie Getz.*

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Professor Sloan's catalog of books, lettering sets, and brass engravings is now 23 pages long. It includes lettering diagrams for the letters sold as well as many of Bob's plans and a history of early Colorado freight cars. The catalog is well worth the asking price of $1.50. Send for one today. *Bob Brown.*

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If you love small trains you must get a copy of the latest J. Conde calendar. The new calendar has 12 beautiful paintings by Mike Kotowski. Each painting shows a different and unusual view of one of the Hawaiian lines which are so dear to Jay Conde's heart. These paintings are well worth framing or keeping at the end of the year in your collection. The paintings are very accurate and can easily serve as modeling information. January shows a little open cab 30 inch gauge loco. May depicts a rainy day on the Oahu Railway and Land Company and July shows my favorite, a Baldwin 30 inch gauge electric loco and train. Make sure you do not miss this excellent calendar. They sell for $5.95 post paid. *Bob Brown.*

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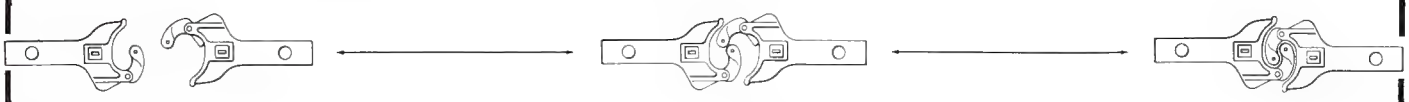

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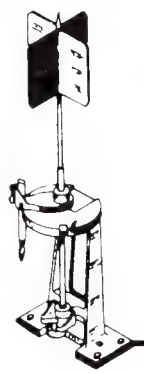

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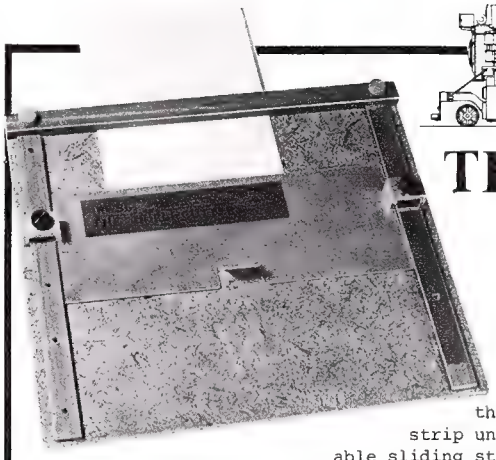

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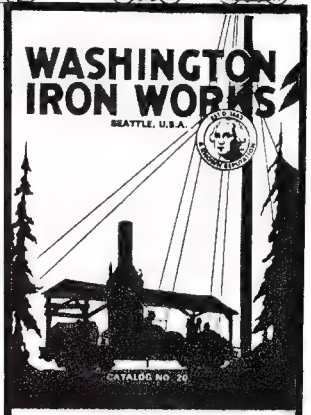

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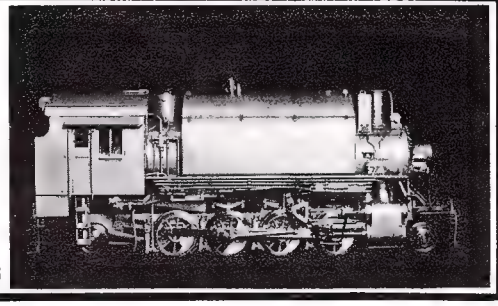

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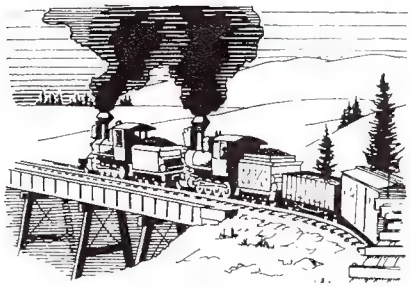

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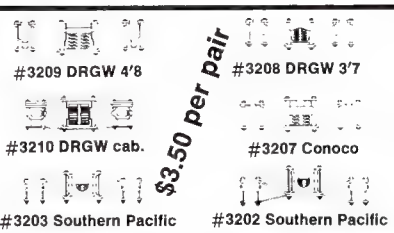

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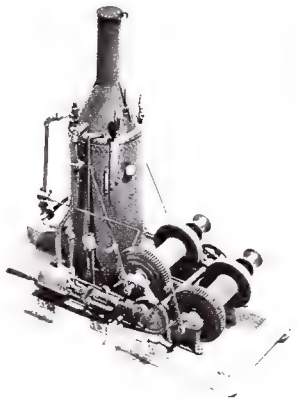

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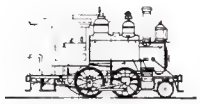

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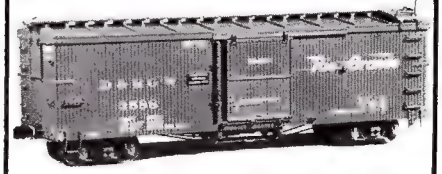

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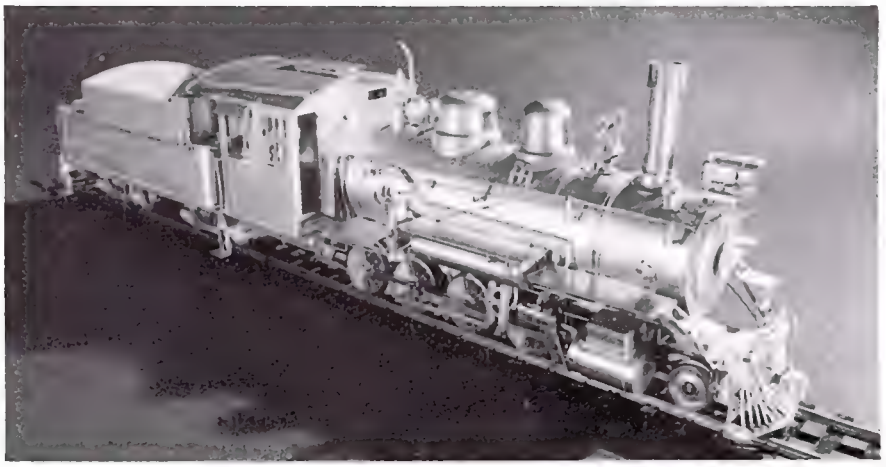

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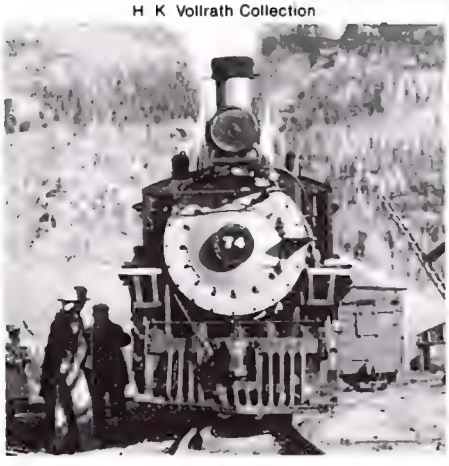

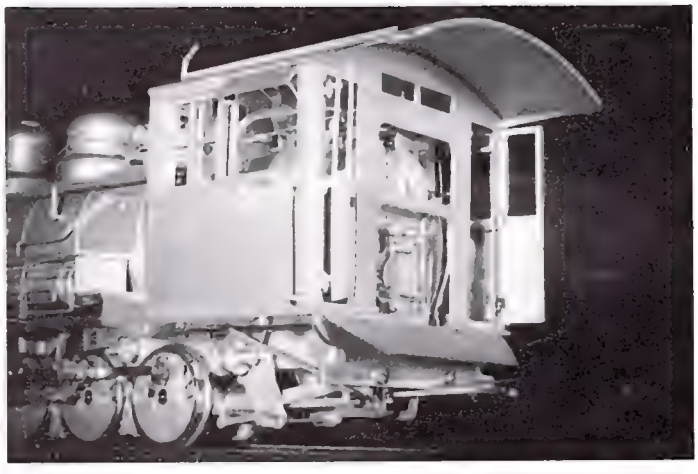

Sunset Models introduces another of its On3 spectaculars—the C&S-RGS Number 74. In keeping with past O & On3 quality models, the Number 74 has full cab detail, working cab doors—front and back, stock cinder screen and cab extension (RGS No. 74) plus the big cinder catcher and drain pipe for the C&S version. Beautifully detailed by Precision Scale Company with brass driver centers and steel tires, the RGS-C&S No. 74 uses the Canon Coreless motor for smooth operation. Ask to see it at your local dealer.

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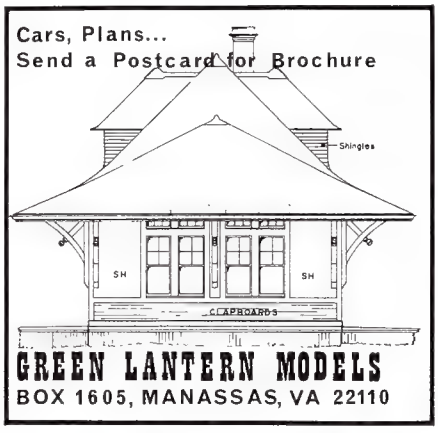

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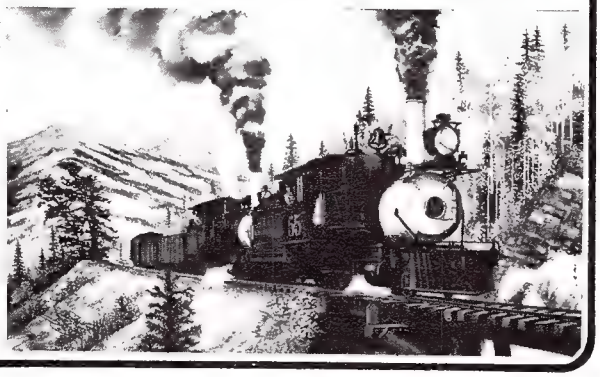

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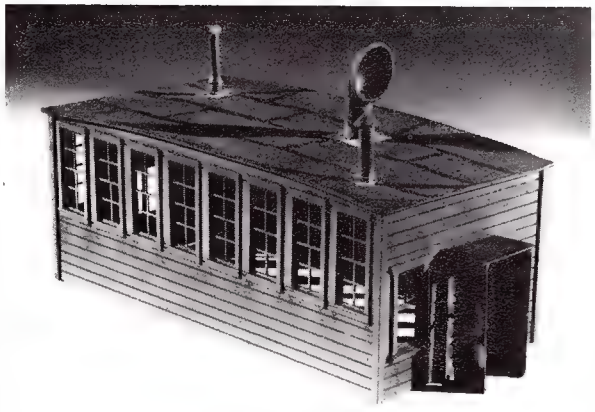

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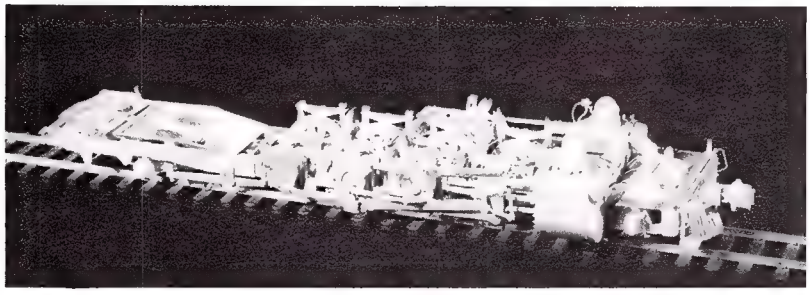

(Pilot Model)

PRE-VIEW !

D & RGW K-37

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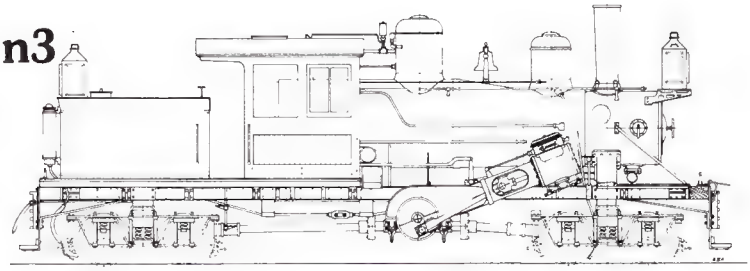

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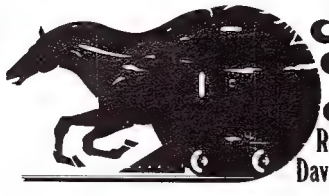

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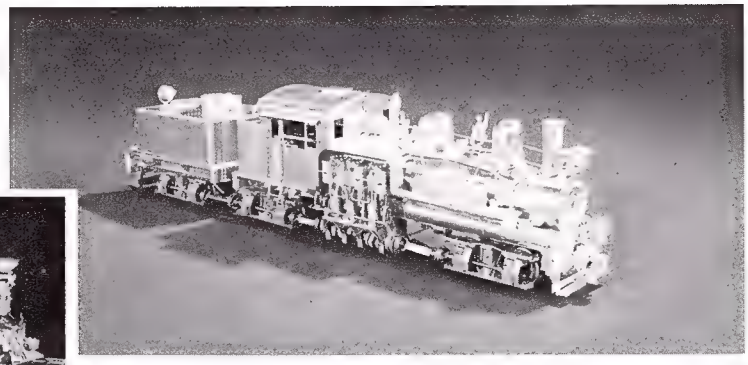
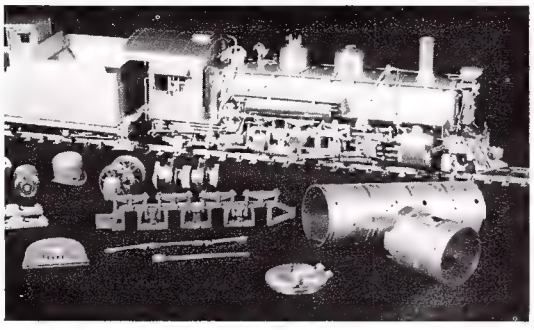
D & RGW K-28 HOn3 Kit





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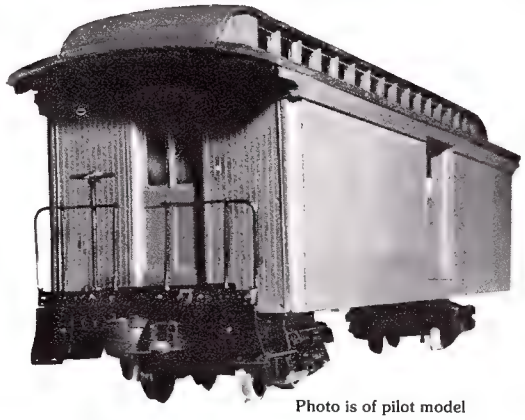

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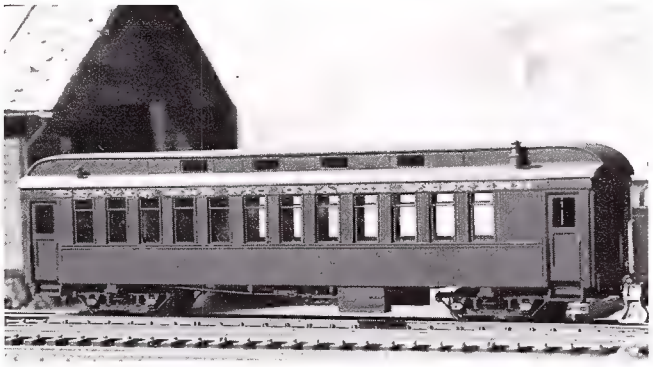

The E. & B. VALLEY RAILROAD COMPANY would like to announce the start of production of our **TWO NEW** kits to be released in **February**. We will be producing two versions of the DENVER & RIO GRANDE coach #319. This car will be available as either an open vestibule, or as a closed vestibule coach, each one true to its prototype.

Coach #319 saw service as two different types of cars, but remained essentially the same throughout its entire life. From approximately 1882 to 1937, #319 was open vestibule, narrow window coach built by Jackson and Sharp. Due to an accident on the "San Juan Express" a closed vestibule coach was destroyed and the railroad needed a new closed vestibuled car to replace her. They hastily pulled #319 from regular service and with minor modifications, changed her into a closed vestibuled coach, but still retained her narrow window configuration, which was contrary to all other closed vestibuled coaches on the "San Juan." For twenty years she saw service on the famous "SAN JUAN EXPRESS" and is still in service every day on the "SILVERTON" train out of Durango.

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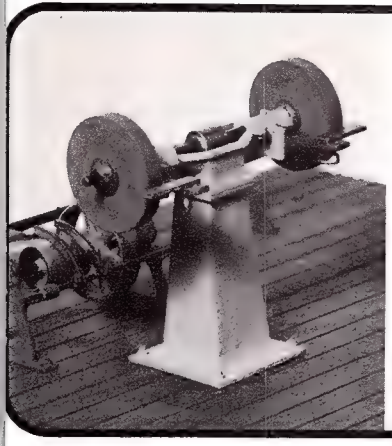

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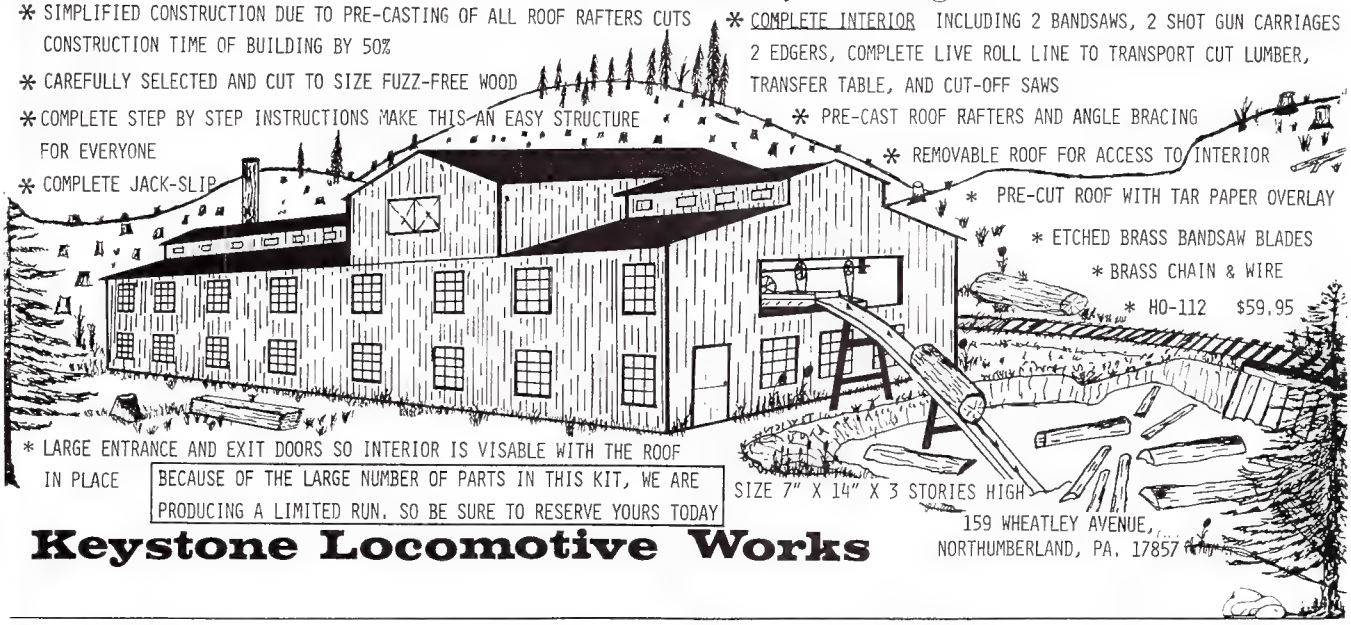

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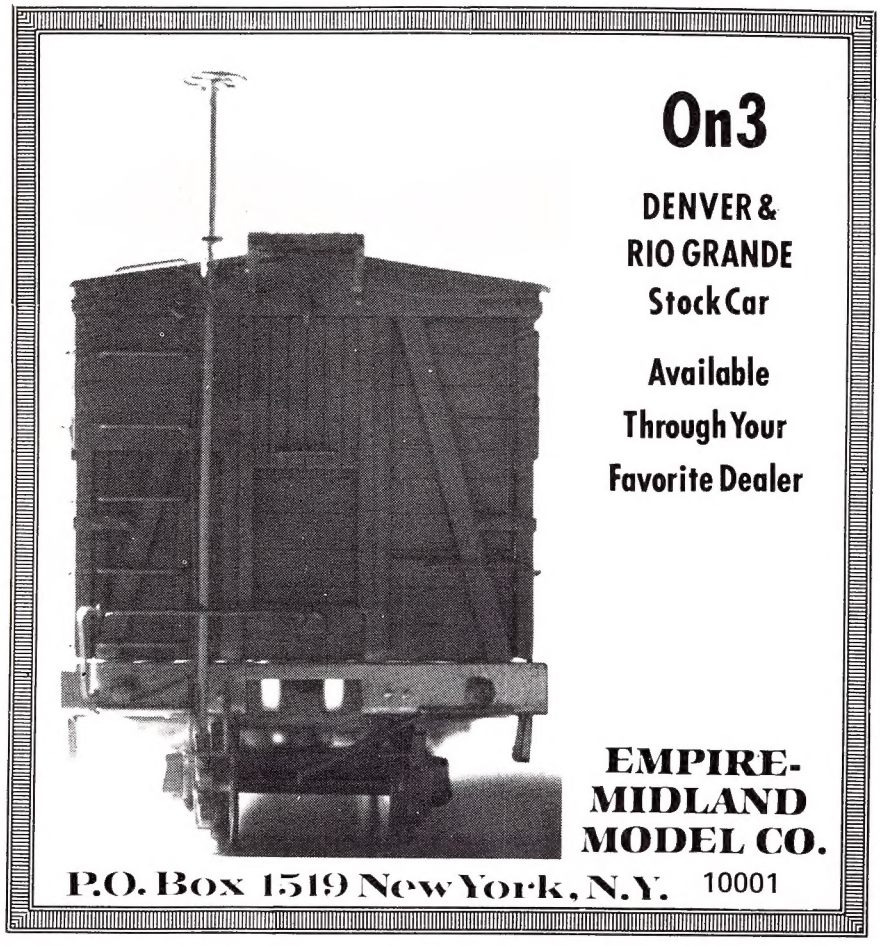
WANT: Pre 1955 slides, prints, negatives of: D&RGW, RGS, C&S operations especially interested in overall views of stations and yards at Sergeant and Gunnison; C.M.ST P. & P. operations on northern division in Wisconsin and Milwaukee C.T.S.E. rolling stock usable as lettering/detailing aids and anything regarding CMSTP&P and Iowa NG. All details first letter. C.K. Dunning, Suite 703, 516 West Jackson Blvd., Chicago, IL 60606.

HAVE: NWSL Shay Std/unpainted Kidder 0-4-OT (HO/On3). Want loggers, rod and geared. State price in letter. J. Klocek, 61-14 81st St., Middle Village, NY 11379. (212) 426-5722.

HAVE: NWSL HO 18 ton Shay, TRO, $275.00. Lambert intermediate HOn3 C&S 2-6-0, ptd, no lettering, smooth running $165.00. Balboa HOn3 Alamosa, used $85.00. PFM HOn3 DSP&P 2-6-6-T TRO $235.00; HOn3 D&RGW short caboose, tarnished, $65.00. Westside Model Co. HOn3 D&RGW compound K-27, TRO, $150.00; HOn3 D&RGW C-16, #278, TRO $140.00; On3 F&CC Caboose, TRO $60.00 and the same painted, lettered #05 with glass windows, $75.00. Separately $1250.00 or $1100.00 entire lot personally delivered in the midwest. C.K. Dunning, Suite 703, 516 West Jackson Blvd., Chicago, IL 60606.

WANTED: Detailed information and photos of the Durango, Colorado yards between 1937 and 1940. Need data from the freight depot south to water tank and RGS temporary terminal. Need photos and measurements of buildings and general layout of scene. Kelly Morris, 632 Grant, Ft. Atkinson, WI 53538 (414) 563-9183.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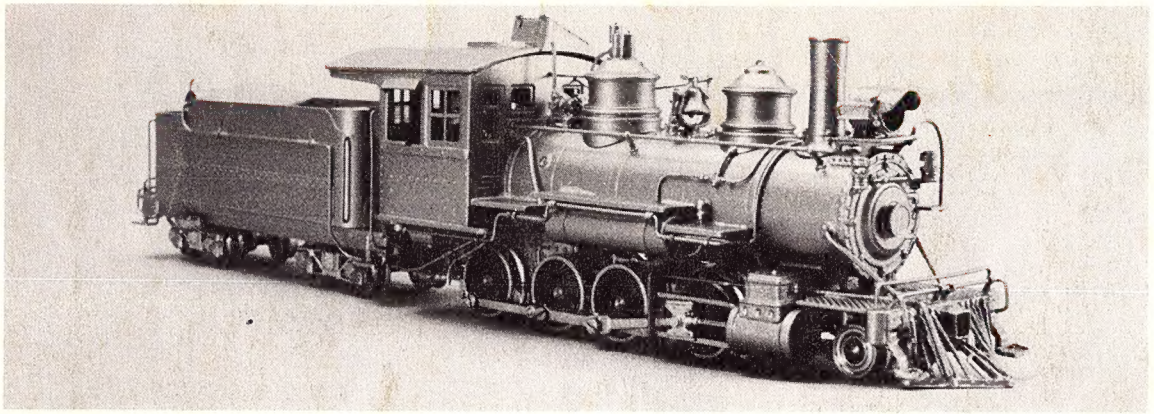

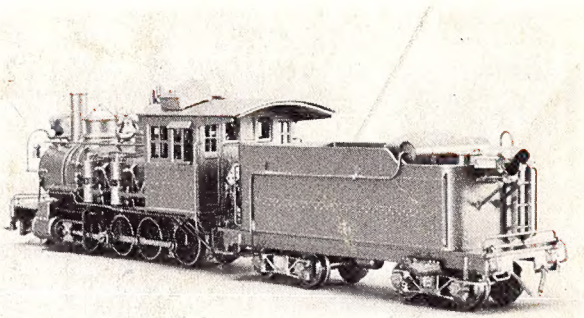

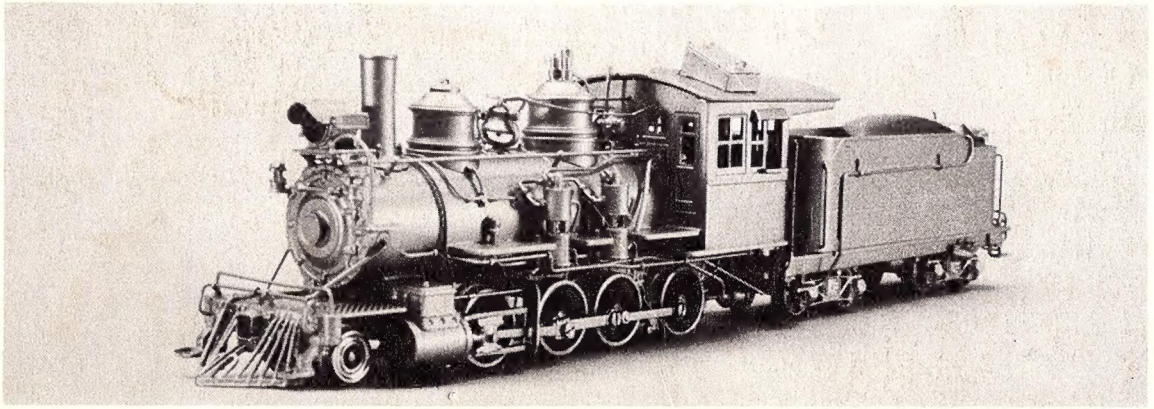

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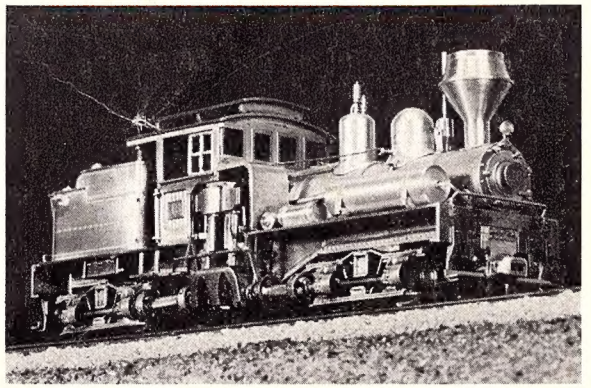

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